The Dissertation Committee for Thomas David Wacker Certifies that this is the approved version of the following dissertation:

AUTODIDAXY IN CHILDREN: UNDERSTANDING INTEREST, THE INFORMAL CURRICULUM AND ENGAGEMENT WITH RATIONALIZED SYSTEMS OF KNOWLEDGE

Committee:

Cynthia Salinas, Supervisor

Anthony Brown

Noah De Lissovoy

Sherry Field

Caroline Sullivan

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by

Thomas D. Wacker, B.A.; M.Ed.

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Dedication

For My Family

Nikki, Genna and Luke

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With all my heart I thank my family for supporting me throughout this process. To my supervisor, you are simply the best scholar, mentor, teacher and person I know. To my committee, thanks for all the reading, comments and support. Few words but many thanks to you all.

AUTODIDAXY IN CHILDREN: UNDERSTANDING INTEREST, THE INFORMAL CURRICULUM AND ENGAGEMENT WITH RATIONALIZED SYSTEMS OF KNOWLEDGE

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Thomas D. Wacker, Ph.D.

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Supervisor: Cynthia S. Salinas

This dissertation is a qualitative case study within an interpretive epistemology that explores the construction and engagement of the informal curriculum and the subsequent interaction with rationalized systems o f knowledge by four young autodidactics between the ages of 9 and 15. The analyses of these constructions, engagement and interactions coalesced into three themes. Theme one establishes autonomy as the penultimate emic feature of autodidaxy through its relations with commitment to endeavors, connections along the experiential continuum, and perceived confidence in abilities to learn and to organize the social environment for further learning. Theme two entails the inherent connection participants conceive between interests and progressive, challenging goals. Theme three focuses on how interests are initiated through the exploratory stance of the participants as they purposefully seek out

experiential problems from their environment, as well as the control of habitual patterns of pursuit and moments of interest assessment.

These themes in relation to the research focus on the informal curriculum and interactions with rationalized systems of knowledge result in three findings. First, rigor is found to operate at multiple levels within autodidactic endeavors; secondly, relevance functions as initial questions arising out of productive boredom tether knowledge to experience and results in persistence and versatility of interest; and finally, the finding of autonomy operates as a process of choice which frames interests with future orientations that afford challenging experiences resulting in joy and the progression of knowledge and skills associated with the interest.

Data analysis throughout the themes and findings discussed above culminate in three implications. First, while not engaging all of the disciplines traditionally associated with formal schooling, the informal curriculum does afford opportunities for the rigorous interaction with rationalized systems of knowledge. Second, the informal curriculum also allows for distinct processes by which connections are made along the experiential continuum resulting in relevance. Finally, in order to facilitate the use of the informal curriculum in formal educational institutions, research is needed in which the informal curriculum is operative to varying degrees in contexts with differential affordances of autonomy, most critically with learners form a variety of lived experiences.

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Chapter One: Introduction

The discussion of education in a society is integral to defining what is deemed most important, and thus how people learn and what people are supposed to learn are always contested (Apple, 1979; Kliebard, 2004). Philosophers, scientists, politicians, specialists of every kind and the general public all offer competing theories and constructions of learning, pedagogical commitments and curriculum iterations. In recent decades curriculum prescriptions have become farther removed from the educational setting as state and national governmental agencies have increased the stakes associated with specific curricular elements resulting in far reaching consequences (McNeil, 1986; Salinas & Reidel, 2007). Assumed to be an important facet in creating informed citizens, a knowledgeable workforce and a coherent multicultural United States society, these prescriptions include divergent and contested curricular components and their attendant pedagogical and theoretical commitments creating a maelstrom of competing claims at the site of public educational experiences.

Within this cultural milieu home-education families are pursuing their own constructions of education outside of formal institutions and until recently have done so outside of the larger discussion of education in U.S. society. Not uniform in their beliefs about education (Stevens, 2001; Van Galen & Pitman, 1991), the approximately 2 million home-educated children (Bauman, 2002; Lines, 2000) in the US offer an important and exciting context in which to explore alternative constructions of curriculum. Due to the relative freedom of the home-educated to follow these alternative curriculum constructions, the home-educated students represent a vital area of research that can

inform public constructions of curricular issues. Additionally since much of the research focusing on the home-educated has sought parental perspectives and actions through survey methodology (Ray, 2002; Stevens, 2001), home-educated children offer an untapped resource into the lived educational experiences arising in these familial contexts, and many times extending out into broader cultural contexts, which may add to our understanding of how these alternative curriculum constructions are enacted.

1.1 HOME-EDUCATION

What we know about this complex, increasingly diverse (Bauman, 2002; Lines, 2000; Taylor, 2005) home-education population has been limited by a monolithic construction in which parental demographics, reasons for home-educating, and subsequent "success" as measured by standardized academic and psychological tests have structured the research of home-education limiting its effectiveness for informing public education. This limited construction of home-education has resulted in a dearth of exploration into alternative curriculum construction and the lived experiences of the children themselves. The home-education curriculum that has received scholarly attention includes specific curriculum iterations such as science (Hornick, 1993) and writing instruction (Huber, 2004). Providing important findings that highlight the agency of children within pre-packaged, traditionally organized and structured curriculum, these studies open new questions about the lived experiences of children and their active engagement with the world around them.

In his qualitative case study, Hornick (1993) relied on interviews with home-educated teenagers and found that parents do not necessarily teach science to their

children, but rather they help the students garner resources with which the students teach themselves. These particular instances of science education were a conglomeration of interest and resources and took place in a general atmosphere that respects and encourages curiosity and inquiry. Huber (2004) in her qualitative multi-case study utilized interviews, artifacts and observation and concluded that while much is not known about home-education writing instruction, home-education families "…are best characterized as social innovators, as customized social units, and as educational cooperatives that integrate writing into their living and learning" (p. iv). Thus Huber (2004) agrees with Hornick (1993) that curriculum enactment in home-education families is largely student-directed and occurs within supportive, innovative family units which help garner resources with which children teach themselves. What is left unexplored and undocumented is how interests develop within the familial and cultural milieu, how these interests are pursued and the role of rationalized subject matter as understood by the home-educated students themselves.

One particular segment of the home-education movement, following the work of John Holt (e.g.1989) and referring to themselves as 'unschoolers', question many of the assumptions underlying the educational theories proffered in US society including the ideas that subject matter should be structured and sequenced by more knowledgeable adults, and that learning is inextricably linked to teaching. Denying any learning or curriculum separate from the fluid experience of life in the natural societal setting, unschoolers pursue an education that is difficult to understand with traditional notions of education. Relying completely on interests arising within the familial and cultural milieu,

unschoolers disregard notions of what children *have* to learn and *how* they must learn it and thus leave much of their education to the children themselves.

Tracing its roots through the "Free School" movement of the 1960's, this radical branch of the home-education movement has philosophical roots that stem from Rousseau (e.g. 1972) to Ivan Illich (e.g. 1973) and A.S. Neill (e.g. 1961). Conceiving the curriculum as wholly constructed from the interests that arise within the natural societal setting and learning as largely self-directed, this movement has always been associated with counter-cultural elements within society that have made research difficult. However research focusing on the 'informal curriculum' and self-directed learning has formed the beginning etic conceptualizations.

1.2 THE INFORMAL CURRICULUM

The fundamental issues driving this study are the curriculum constructed through student interests and pursued through self-directed learning. John Dewey (1910) contends that society has achieved a complexity that denies the experiential 'how to do' knowledge so important for integrating rationalized knowledge. Rationalized subject matter is our cultural inheritance representing the combined knowledge of the race, that which allows people to act intelligently in the world (Dewey, 1961). Currently, formal institutionalized schooling is called upon to act as the 'wisest parent' and direct educative experiences. An educative experience, according to Dewey (1961), is one which leads the subject to ever more expansive experiences and the ability to act intelligently in their world (Prawat, 2000; Pring, 2007). Within Dewey's pragmatic philosophy the interests of the child represent their dawning powers leading to rationalized subject matter which

is needed to discipline the interest and provide outcomes which give children the outlook and method of the inherited wisdom of the human race. However, the assumed need to move from informal to formal pedagogical structures and curriculum organization is questioned by unschoolers out of which arises what is referred to as the 'informal curriculum'.

In their groundbreaking research into informal learning and the informal curriculum, Thomas and Pattison (2007) assert that:

> Most of what children learn during the early years, including the foundations for literacy and numeracy on which much of the primary curriculum is based, is acquired informally, largely through everyday interaction with their parents/carers. There is no developmental or educational logic behind the radical change in pedagogy from informal to formal when children start school and there is no reason, a priori, why this cultural apprenticeship of early childhood cannot be extended though the primary school years and beyond (p. 11).

Thus, the assumption of formal pedagogy and curriculum organization is questioned in unschooling contexts in which 'informal learning' is deemed sufficient for school age children to learn content and skills associated with current, formal elementary curriculum constructions. Additionally, Thomas and Pattison distinguish three types of 'informal learning' including: 1) implicit, or that which occurs without awareness of the learner; 2) incidental, or the learning that takes place while children are busy doing other things; and 3) goal-directed which is overtly focused on learning something specific. While difficult to distinguish which type of 'informal learning' is taking place in daily life, the typology offers important hints as to the scope of 'informal learning' as well as possible avenues of research. The attendant 'informal curriculum' refers to the world around children, and in the context of 'goal-directed' learning, focuses on the interests of children as they engage with their family and the wider culture on a daily basis. This engagement is described as

a ‘cultural apprenticeship’ in which a variety of skills and intellectual understandings are expected but not differentiated along traditional subject parameters.

Thomas and Pattison (2007), utilizing an anthropological and educational framework report reconstructive interviews with unschooling parents in their attempt to better understand informal learning and the informal curriculum. They conclude that 1) parents/carers play an active role in their children’s informal learning although it is not qualitatively different from that provided by many schooling parents; 2) the interests which captivate unschooled children are powerful due to the relevance they hold for them, and children show themselves fully capable of exploring their environment; and 3) the surrounding culture provides a wealth of everyday objects and activities which stimulate the same subject matter traditionally taught in the elementary classroom years.

This ground breaking research into informal learning and the attendant informal curriculum introduces two important issues: 1) interest development in unschoolers; and 2) the experiences of older unschoolers and their interaction with formal subject matter beyond the elementary curriculum. Additionally, exploring the emic understandings of unschooling children offers opportunities to further conceptualize interests, their development and the construction of the informal curriculum as this focus on interest arises from the importance placed on child initiated subjects by unschooling parents. Due to the overwhelming participation of school aged children in formal education, the assumptive need for formal curricular structures has been difficult to explore. Unschoolers offer a fitting context to explore these assumptions, however beginning conceptions must be borrowed from adult education as it is one of the few places where

scholarly attention has been given to the type of self-directed learning (SDL), or autodidaxy, described by the limited research into the informal curriculum.

1.3 SELF-DIRECTED LEARNING

While self-directed learning has received scholarly attention in adult learners since Houle's book **THE INQUIRING MIND** was published in 1961, the extension of this work into younger age groups has not received much attention. Even though SDL literature is many times situated within lifelong learning, the younger populations have been ignored except for footnotes that attest to limited endeavors usually arising out of formal school work (Tough, 1971) and calls to better understand its development (Candy, 1991; Merriam & Caffarella, 1991). However in unschooling families where the 'what' and 'how' of learning is left to children's interests arising from the natural societal setting, there is little known about how these interests arise and how they are pursued. Given the absence of formal educational structures which determine content and engagement of educational experiences, SDL literature offers possible understandings of the unschooling environment that may help in conceptualizing a curriculum constructed and pursued arising from the interests of home-educated children.

As a beginning understanding of unschooling and the informal curriculum, autodidactics are involved in a qualitatively different process (Resnick, 1987; Roberson & Merriam, 2005) from more formal institutions and engaged in an unpredictable enterprise (Griffin, 1981) while reacting to a problem situation arising from the 'natural societal setting' (Taylor, 1987). Heavily influenced by the context in which this problem occurs (Spear & Mocker, 1984), they are reliant upon other members of their social

world in pursuit of its resolution and their motivation, organization of the problem, and approach to gathering resources and solving the problem are influenced by past experience and family background (Leean & Sisco, 1981). Additionally, autodidactics are cognizant of their habitual patterns of pursuit (Danis & Tremblay, 1987), take advantage of every opportunity to learn, and engaged in pursuits ill-defined at early stages (Spear & Mocker, 1984; Taylor, 1987).

1.4 RESEARCH QUESTIONS

Beginning with these understandings of autodidaxy in adults and adding Dewey's conceptualization of knowledge, interest and discipline within his pragmatic philosophy, this dissertation aims to better understand the emic perspective of younger autodidactics as they construct and engage their informal curriculum within the context of the unschooling family. The research questions are: How do young autodidactics construct and engage the informal curriculum? What are their experiences with rationalized subject matter? The highly contextual answers to these questions allow for better conceptualization of alternative curriculum constructions and highlight emic understandings of autodidactics in the pursuit of their interests. These interests, their pursuit and the place of rationalized subject matter will aid the understanding and construction of curriculum iterations that are more open to student construction and enactment.

1.5 DESIGN AND OVERVIEW OF THE STUDY

These questions were explored utilizing a qualitative interpretive case study design beginning in the spring of 2009. Due to the research questions and the context,

qualitative case study is well-suited to the thick, rich data needed to understand the complex issues and multiple constructions involved in a curriculum centered on interests arising and pursued within the familial and cultural milieu. Four children were purposefully selected who are between the ages of nine and fifteen and are in a self-professed unschooling family. Data was collected through observation, as well as semi-structured interviews, talk-aloud interviews, and artifacts. Simultaneously collected and analyzed, the data is reported in thick, rich narrative style that describes the emic understandings of young autodidactics as they construct and engage the informal curriculum, and interact with rationalized systems of knowledge.

Chapter Two: Review of Literature

The home-education phenomenon has grown rapidly throughout the last three decades and includes an estimated 1.7 million to 2.1 million 'school age' children encompassing more than charter or alternative schools (Bauman, 2002; Lines, 2000). The scholarly research into this phenomenon is comparatively small, overwhelmingly reliant on survey methodology and focuses on familial demographics (Lines, 2000; Mayberry, 1989) educational achievement (Belfield, 2005), emotional well-being and socialization (McDowell, 2004; Sheffer, 1995), curriculum iterations (Hornick, 1993; Huber, 2004), pedagogical practices (Hood, 1994; Taylor, 1997; Thomas, 1998) and parents' reasons for deciding to home-educate (Van Galen, 1988; Van Galen & Pitman, 1991). Gleaned from this research the home-education population is largely white, protestant and middle-class although Latino, African-American, Catholic and Muslim families are growing (Bauman, 2002; Lines, 2000; Taylor, 2005). Additionally, while plagued by methodological difficulties, academic achievement and socialization outcomes appear to at least be equal to that of public school students (Lines, 2000; Ray & Wartes, 1991). Interestingly, while many families begin with traditional formats of education (e.g. school at the kitchen table), many gradually shift to more informal, relaxed methods and curricular organizations (Thomas, 1998). However, there is a dearth of research that focuses on these informal processes and curricular organizations and even less that seek the perspectives of home-educated children themselves.

The 'informal curriculum' has been shown to result in similar learning (e.g. reading and numeracy skills) as conventional elementary education. Utilizing reconstructive interviews of twenty-six home-education parents who ascribed to informal

learning , Thomas and Pattison (2007) found that through immersion in our culture, a type of 'life apprenticeship', children in unschooling families become equated with the reading and numerical skills associated with many adult activities. While difficult for traditional educators to fathom, left to chance life experiences in the familial milieu, these parents provide rich examples of children learning when they became interested in some facet of their surrounding culture that utilized these skills. Not only did following their interests lead children to the learning of basic skills associated with traditional education, but also resulted in highly advanced skills in particular fields. The home-education curriculum that has received scholarly attention also includes specific curriculum iterations such as science (Hornick, 1993) and writing instruction (Huber, 2004) that provide important findings highlighting the agency of children within organized and structured curriculum.

Hornick (1993) in his qualitative case study relied on interviews with home-educated teenagers and found that parents do not teach science to their children, but rather they help the students garner resources with which the students teach themselves. These particular instances of science education were a conglomeration of interest and resources and took place in a general atmosphere that respects and encourages curiosity and inquiry. Huber (2004) in her qualitative multi-case study utilized interviews, artifacts and observation and concluded that while much is not known about home-education writing instruction, home-education families "…are best characterized as social innovators, as customized social units, and as educational cooperatives that integrate writing into their living and learning" (p. iv). Thus Huber (2004) agrees with Hornick (1993) that curriculum enactment in the home-education families they interviewed is

largely student-directed and occurs within supportive, innovative family units which help garner resources with which children teach themselves. What is left unexplored is how interests develop within the familial and cultural milieu, how these interests are pursued and the role of rationalized subject matter as understood by the home-educated students themselves. If the understanding gained from these studies is to be utilized to inform and reform more conventional structures of education, we must explore the interests, the attendant process by which interests are explored and the ways these interests lead to engagement with rationalized systems of knowledge.

Informed by the work of John Holt (e.g.1989) and referring to themselves as 'unschoolers', adherents to this informal education see no curriculum or learning separate from the fluid experience of life in the 'natural societal setting.' As such they offer a unique space to explore the context in which life and learning take place and its interactions with the self-directed learning (SDL) models developed by adult education researchers. In this review of the literature I begin with Dewey as he lends analytic rigor to a constellation of important educational concepts including the nature of knowledge, interests and discipline in the context of his pragmatist philosophy. Due to the dearth of research on the 'informal curriculum' and any focus on the perspectives of the children themselves, the adult education literature focusing on self-directed learning (SDL) will be explored for its connections with Dewey and its relevance for understanding how unschoolers construct and engage their informal curriculum, and interact with rationalized subject matter.

2.1 THE NATURE OF KNOWLEDGE

From his pragmatist perspective, one which exchanges an 'experimental theory of knowledge' for the 'spectator theory', Dewey espouses a tri-partite stage model of knowledge: 1) knowledge of *how to do*; 2) communicated knowledge; and 3) logically organized, rationalized knowledge (Dewey, 1980b, p. 197). Important for our purposes here however, is the statement that these "stages of growth in knowledge are 'relative, not absolute.' Knowledgeable people who are to begin a new subject matter will 'learn by doing' (Dewey, 1980b, p.192), and thus knowledge of *how to do* will be necessary and empowering for any learner, young or old. An interesting position given Dewey's claim that

> (t)he fundamental factors in the educative process are an immature, undeveloped being; and certain social aims, meanings, and values incarnate in the matured experience of the adult. The educative process is the due interaction of these forces (Dewey, 1980a, p. 4).

Dewey has a nuanced view of knowledge that deeply impacts his ideas on education. Refusing to side with the forces of 'child study' or the traditionalists of his time (Tanner, 1997), Dewey constantly sought to break down dichotomies wherever he found them. He did not set the child against the curriculum, but rather saw them as two points on the same line.

Knowledge for Dewey is generative and always viewed as 'warranted assertions', propositional and open to further testing. While this has led critics to condemn perceived sidestepping of 'truth', within his conception of an interpretive episteme that does not deny a separate reality, Dewey sees the ontological question as an impasse not fit for philosophy or education and only leading to dogmatic juxtaposition of unfalsifiable assertions (Pring, 2007). Instead the generative, social nature of knowledge on an

'experiential continuum' allows connections to be made along it and transformation of existing structures of knowledge we have inherited which simultaneously denies any foundational concept of truth based on idealism or empiricism. While not able to question all concepts at once, pragmatism's 'middle way' denies both of these extremes.

> On the one hand, one cannot ignore the experiences that constantly impact upon our thinking, which are experiences not of our making. On the other hand, such experiences do not come, as it were, raw, uninterpreted by the thought-system of the person doing the experiencing. They do not give us direct access to a world independent of our thinking. Furthermore, this 'thinking being' is not awaiting passively for further experiences, he or she is active, seeking perceived goals or ends-in-view, and having to adapt to, and to interpret, experiences as they occur (Pring, 2007, p. 149).

Dewey was familiar with the excesses of both positions and once again sought to break down the dichotomies between objective/subjective and idealism/empiricism. While discussion of his success or failure fills countless pages, what is relevant here is how his conception of knowledge influences his ideas of education and the curriculum and how we can use these conceptions to enlighten the present discussion of how children develop interests, pursue the informal curriculum and engage with rationalized subject matter.

To the oft stated pragmatic maxim, 'whatever works is true', Dewey conceives a social, ever-changing quality to knowledge all along the experiential continuum as humans interact with their environment. "What is distinctive of persons is their capacity to reflect upon these interactions, to articulate the organization of experience, and in particular to interact with the ways in which others have made sense of them" (Pring, 2007, p. 74). Thus, all stages of knowledge are social and the value of 'warranted assertions' lies in solving problems through fact *and* method. "There is then nothing final about a logical rendering of experience. Its value is not contained in itself; its

significance is that of standpoint, outlook, method" (Dewey, 1980a, p. 22). From the directly experienced knowledge of *how to do*, through the ubiquitous communicated knowledge epitomized by libraries and into the systematic, rationalized academic disciplines, all knowledge is fluid and open to continual amendment and suspension.

What connects all of these stages of knowledge is there relation to experience and their bearing on the inevitable problems associated with that experience. Even though my linear writing has created a hierarchy of knowledge, Dewey's ideas of experience and knowledge are much more nuanced and do not allow for a 'triumph' of one stage to the detriment of the others. While acknowledging the productive power of the academic disciplines, to understand these disciplines one must still make connections all along the experiential continuum in order to internalize their use and realize their potential. The educational process should,

> …establish the connection between the relatively inchoate but immediate and vital experience of the child and the logically organized but rather remote and abstracted experience of the human race. Whatever the differences between these two forms of experience, in Dewey's view, they remain organically connected (Kliebard, 2006, p. 120).

It is experience that 'organically' connects them and the imbedded problems that experience provides. Divorced from this connection to experiential problems all knowledge becomes abstract and difficult to use in solving those problems. Connected to these problems, knowledge is utilized to open up the individual to further, fuller experiences.

Any specific knowledge is not inherently a subject matter but rather it *becomes* subject matter. "In the course of everyday living, people are continuously engaged in noticing and assembling particular 'facts' and developing 'ideas' because they seem of

use in addressing some problem or perplexity persons are interested in" (Page, 2006, p. 45). Consequently, all facts and ideas become subject matter when they are "reckoned with in the process of a person carrying forward an active line of interest" (Dewey, 1980b, p. 141). This expansive view of subject matter is situated first in an informal context where "… knowing involves the intellect and also the body; knowledge is a crucial resource for dealing with real-world problems; … and teaching and learning in everyday life are active, constructive processes rather than a mechanical transfer of one person's ideas to another person" (Page, 2006, p. 46). Incidental knowledge is fundamentally important to our sense of self, our relations with others and our stance in the world with all other formal subject matter appended to it (Dewey, 1980b, p. 7). The importance of informal, incidental knowledge is attested to as our "most deeply-ingrained knowledge" (Dewey, 1980b, p. 192). However in contrast to informal knowledge which is usually unplanned, formal subject matter is standardized and rationalized abstraction such that concepts are related to each other rather than directly to experience.

According to Dewey society has become so complex the informal methods of instruction that characterized earlier historical moments of education break down. Life no longer affords the experiences: 1) of *how to do* knowledge because children do not (cannot?) participate in many adult activities; 2) that would reach the scope of the "immense bulk of communicated subject matter" (Dewey, 1980b, p. 189); and 3) that could possibly lead to much of the highly specialized knowledge now available. Added to these is the related assertion that present competencies are based on "standard ideas" (Dewey, 1980b, p. 189) so that we do indeed stand on the shoulders of giants and the system of informal education becomes untenable. Given these historical and cultural

conditions groups invest in formal education with the attendant subject matter selected and organized for efficient interaction. This subject matter is not only important as the inherited wisdom of the human race but serves another important function in Dewey's conception of the educative process.

Dewey calls for teachers to interpret the interests of learners through the lens of rationalized knowledge in order to direct their energies toward the ends-in-view of academic disciplines as they are inherited today. Not because the disciplines represent infallible 'truth', but rather because they contain the wisdom of humanity's experience to date. As such, the relationship of rationalized knowledge to the child defines the educative process.

> There are existing natural interests on the part of the child, due in part to the stage of development at which he is arrived, in part to his habits previously formed, and to his environment. These are relatively crude, uncertain, and transitory. Yet they are all there is, so to speak, to the child; … they are the starting points, the initiations, the working machinery. Subject matter, in all its refinements and comprehensiveness, is one name for the answer to the question: What shall these dawning powers amount to? (Dewey, 1967, p. 142).

Curriculum is not just the 'stuff' to teach, but rather rationalized subject matter offers the lens through which to see the culmination of dawning interests in the child. Knowledge then becomes an analytical tool that offers the direction in which children should travel.

Dewey cautioned that the subject matter of the school not remain an abstract conceptual framework largely divorced from experience. The fact that it is standardized and rationalized means that it has been organized so as to facilitate understanding of the important concepts in a field of study. However, if connections are not made to its basis in experience and the solving of human problems it becomes reified and does not display the social origins and uses for which it was developed. This led to Dewey's call for the

pyschologizing of the curriculum which charges the teacher to stand at the juncture between child and subject matter and interpret interests in light of subject matter.

> For Dewey, that connection between subject matter and human purpose needed to be reestablished in a school setting- not because those activities are still necessary for individual survival, but because they provide an avenue for reestablishing the taut connection between knowledge and human affairs (Kliebard, 2006, p. 121).

Without this connection knowledge does not become something to use for solving problems but rather an inert conglomeration of facts with no connection to human experience. Thus, instead of adding on to existing interests which children have been exploring through informal means throughout their lives, this inert knowledge is relegated to "school knowledge" that has no purpose outside of the institutions which are charged with the passing along of our rich cultural inheritance. "Only in education, never in the life of farmer, sailor, merchant, physician, or laboratory experimenter, does knowledge mean primarily a store of information aloof from doing" (Dewey, 1980b, p. 193).

The discussion thus far has focused on Dewey's notions of knowledge and how they relate to education. However, this has also raised questions as to what is meant by an 'interest', and how notions of 'standard ideas' and present competencies relate to discipline. If in fact interests are 'all there is to the child', then a more in depth exposition of Dewey's understanding of this important concept is needed. The notion of 'interests' is used frequently in the literature of the informal curriculum as well as the much larger research tradition of adult education focusing on SDL. Additionally, the 'standard ideas' involved in becoming competent implicates educational discipline and must also be further explored. In order to better understand these assertions and their

effect on conceptualizing informal curriculum engagement, they must be contextualized with Dewey's notions surrounding interest and discipline.

2.2 INTEREST

Dewey states that "…impulse is simply the impetus or outgoing of the self in one direction or another" (Dewey, 1967, p. 133) and interest is the "…impulse functioning with reference to an idea of self-expression" (Dewey, 1967, p. 124). Not arguing for the natural or inherent good of impulse but rather defining its qualitative nature, Dewey views impulse as the engine of interest. To further the analogy, the gears of interest are threefold: 1) interest is active and propulsive; 2) interest is objective in the sense of concerns; 3) and interest is subjective in that it signifies an 'internal realization of worth.' Within Dewey's pragmatic philosophy, interest has different qualities based on its relation to means and ends and the ability to connect means and ends so that they are suffused is a developing aptitude that distinguishes the child's mind from the adult's.

Self-expression that is direct and without ends in mind are defined as immediate and examples of play and aesthetic appreciation are used to display the parameters of this type of interest. However, mediated interest is defined as an assumed relationship between things indifferent and things of value.

> It is all a question of relationship, whether it appeals or fails to appeal; and while the little child takes only a near view of things, as he grows he becomes capable of extending his range, and seeing an act, or a thing, or a fact, not by itself, but in its value as part of a larger whole (Dewey, 1967, p. 126).

Dewey seems to be arguing for a relationship between interests and the means of their fulfillment, and this relationship is explained within the development of an adult's capacity to connect the interest through means to a larger whole. If indeed interest is "to

be between," then it lies at the crossroads of the person and the materials and results of their action. Interest "… is the instrument which affects their organic union" (Dewey, 1967, p. 122). Thus, an object in the environment "… has interest when it presents itself as an instrument of carrying into effect some dawning energy or desire" (Dewey, 1967, p. 124). This development from childhood immediate interest to mediated interest is connected to Dewey's epistemology. Interests are intimately connected with 'how to do' knowledge because they occur in between the person and the environment.

Dewey highlights the importance of the social context in people's lives, and this social context results in interests and the understandings they lead to as idiosyncratic. Interests, the dawning energies they signify, and the rationalized subject matter they (re)cognize result in idiosyncratic pursuits and understandings. Criticizing those that would set the ends of education from outside the context, Dewey argues against autocratic systems which designate the curriculum for the teacher in complete disregard of the child (Dewey, 1980c). Within this critique he discusses the meanings of results, means, ends-in-view and aims that highlight the interesting dimensions of children engaged with an informal curriculum.

The results of an action arise from the environmental factors surrounding the action and are attendant to it, but an end encompasses more than these results because it completes the action and *leads to further action*. Thus there is more than an aggregate of actions, but rather the "work assigned possesses intrinsic continuity" (Dewey, 1980b, p. 122). The ends-in-view refer to a consciousness of their future completion and aims are acting in accordance with the end-in-view.

> The net conclusion is that acting with an aim is all one with acting intelligently. To foresee a terminus of an act is to have a basis upon which to observe, to select, and to order objects and our own capacities. To do these things means to have a mind- for mind is precisely intentional purposeful activity controlled by perception of facts and their relationships to one another"(Dewey, 1980b, p. 124).

Decisions made during the pursuit of interests are based on the end-in-view. However the aim, as mindful action with ends-in-view, must take account of the circumstances which are ongoing and an aim is being tested as actions are undertaken. In other words, the aim is not usually fully formed because it is altered by the intrinsic continuity of action. Thus, aims cannot be designated separate from the context in which they are pursued and the aims will change in response to the successive, continuity of meaningful actions in interaction with the changing context.

The connection between ends-in-view and interests highlights Dewey's view of the right way to select subject matter and its connection to the child's present experiences, needs, powers and tendencies.

> …(T)he teacher shall present the new material in such a way as to enable the child to appreciate its bearings, its relationships, its necessity for him. It is this *bringing of the child to consciousness* in new material which constitutes the reality of what is so often perverted, both by friend and foe, in the idea of 'making things interesting' (Dewey, 1967, p. 127, italics in original).

To infuse the child's interests with the ends-in-view offered by rationalized subject matter means more than simply adding geography to an interest in rocks. 'Bringing the child to consciousness' implies helping the child to slowly append the rationalized subject matter into the interests pursued. New material is presented when it can be linked to an interest in such a way so that the *child* recognizes the use of this new knowledge within the context of an ongoing interest. When Dewey refers to a 'necessity' he acknowledges that an interest must have an end-in-view no matter how ill-defined that

arises from the child's present circumstances. This is the 'internalization of worth' in the definition of interest that is robust and allows a fuller understanding of interests and how they relate to the continuity of action surrounding the pursuit of an interest. Dewey also discusses this connection directly in *Interest in the relation to the training of the will* (Dewey, 1967).

While transferred interest (the carrot and stick) is viewed as a base connection between means and ends (e.g. conjugate verbs so as to not get hit), mediate interest is when the means are suffused with an end already integral to the self. "… (T)he interest in one (the means) is not simply externally tied on to the other (the end); it suffuses, saturates, and transforms it. It interprets or revalues it- gives it new significance in consciousness" (Dewey, 1967, p. 127). Interests as dawning capacities already include an end, and this end saturates the means through which it is pursued. "A genuine interest in the ideal indicates of necessity an equal interest in all the conditions of its expression" (Dewey, 1967, p. 128). Thus for Dewey, the way to genuine interest is only achieved through a focus on the end which then permeates the means of its expression. The place of interest in his conception of the educative process is 'to be between' the person and the environment, but also 'to be between' the ends and means arising out of this context.

Interests are also classified by Dewey as "… the interest in conversation, or communication; in inquiry, or finding out things; in making things, or construction; and in artistic impression- we may say they are the natural resources, the uninvested capital upon the exercise of which depends the active growth of the child" (Dewey, 1980a, p. 140). However, Dewey is quick to note that the interest is not an achievement and should not to be viewed as a finished accomplishment, but rather as an attitude from which to

pursue possible experiences. "The significance of interest is in what it leads to; the new experiences it makes possible, the new powers it tends to form" (Dewey, 1980a, p. 142). Interests are educative because they operate in a social world in which we are not in control of the consequences of our actions. Through repeated trial and error, exemplified but not reduced to the experimental method, we are able to control our actions in light of possible consequences keeping in mind the consequences themselves are an interpretive act within an environment which we must accommodate.

> The little child who thinks he would like to cook has little idea of what it means and costs, or what it requires. It is simply a desire to 'mess around', perhaps to imitate the activities of older people… But here, too, if the impulse is exercised, utilized, it runs up against the actual world of hard conditions to which it must accommodate itself; and there again come in the factors of discipline and knowledge (Dewey, 1910, p. 106).

We do not interpret our world in a vacuum, and the 'hard conditions' make interests educative if they lead to further knowledge and discipline. Thus if interests lead to mindful attention to the end-in-view and the continuity of acts to express its fulfillment they lead to new experiences in which our view is transformed by previous experiences. Knowledge and its bearing on Dewey's conception of education illuminates the nature of interests and their importance in relation to rationalized subject matter. Discipline is now explored in order to better understand Dewey's conception of interests, means and ends as well as how this notion of discipline relates to the present focus on children's engagement with the informal curriculum.

2.3 DISCIPLINE

Discipline is normally conceived in education as externally imposed sanctions, but Dewey offers a contrary discussion in **DEMOCRACY IN EDUCATION** (1980b) that

further illustrates his conception of the educative process. Discipline in relation to interests and rationalized subject matter refers to following the rules which are applicable to bring about the desired end. To follow an interest in a disciplined manner is "to clarify the end and the means to attain that end, to deal with distractions, to master the resources and the skills needed to persevere with the enterprise" (Pring, 2007, p. 106). Rationalized subject matter, commonly referred to as the disciplines, contain the agreed upon process, outlook and assumptions by which means and ends are identified. While these are 'warranted assertions' not above reflection and testing, they act as the abstract knowledge of the human race. Interests are the individual's 'outgoing of the self' and when educative lie between personal experience of the individual and that of the combined human race. This discipline offered by the rationalized subject matter can be facilitated by others but must arise and be connected to the individual and the interest being disciplined. This social understanding of discipline in relation to the wisdom of past generations is extended through Dewey's discussion focusing on the pre-industrial institution of the family.

Arising from cooperative activities, discipline is seen as an outcome of working with others toward ends imbued with social significance. In the pre-Industrial families of Dewey's childhood, the activities of the family required cooperation, reciprocal obligations and support. Additionally, these activities engendered deep loyalty and developed the discipline necessary for working in a group. In the absence of these experiences within the family due to historical and cultural factors associated with the industrial revolution and the division of labor, Dewey calls for the development of formal schooling that meets these requirements for discipline through social cooperation. Thus,

once again the experiences of children have changed, and it is Dewey's contention that formal schooling must meet the challenge of offering the experiences now lacking in the wider social context of today's families. Thus the social nature of discipline is two-fold: discipline through rationalized subject is social in that it structures means and ends in socially prescribed ways; and discipline is imbued with social significance through engagement with others in a social group.

Dewey's conceptual framework involving knowledge, interests and discipline owe much to his pragmatic philosophy. The stages of knowledge, the categorization of interests and the interaction of discipline with both knowledge and interests are imbued with the notions surrounding ends-in-view and intelligent action of aims. Given the social and contextual nuances of his work, Dewey's conceptions offer analytic rigor and a robust framework from which to explore the informal curriculum, its construction, engagement and attendant processes. Additionally, the importance attached to interest as that which affects the 'organic union' of subject and environment lying between 'how to do' knowledge and rationalized subject matter is also attended to within the adult educational literature focusing on self-directed learning. We now turn to this specific portion of the literature which explores self-directed learning (SDL) as it relates to Dewey's conceptualization of knowledge, interests and discipline as well as its ultimate illumination of engagement with the 'informal curriculum' and the place of rationalized subject matter.

2.4 SELF-DIRECTED LEARNING AND THE PROCESS OF AUTODIDAXY

Self-directed learning (SDL) has been a defining concept within adult education for over thirty years (Merriam & Caffarella, 1991) and has been traced from as far back as Plato through the self-culture movement of the 19th century and into the present (Rose, 1997). However scholarly inquiry of SDL began with Houle's book **THE INQUIRING MIND** (1961), and continued with the seminal work of Allen Tough (1971) who utilized structured interviews to investigate deliberate learning episodes without institutional support. SDL is an umbrella concept which has gathered people from divergent perspectives under its auspices and been espoused as a personal goal for growth, a methodological means and as a societal end to foster lifelong learning that extends democratic values. Additionally, it has been labeled a set of assumptions (with or without empirical bases), a loose theoretical constellation, a method of instruction, and a personality characteristic (Merriam & Caffarella, 1991). Candy (1991) delineates four major foci used by scholars in their attempt to better understand and conceptualize SDL.

1) Autonomy is regarded as a personal attribute by many adult educators and is epitomized by the work of Guglielmino (1989) and Oddi (1986) which use readiness scales (e.g. SDLRS) to measure people's overarching degree of "self-rule."
2) Self-management is SDL as the capacity and willingness to conduct one's own learning episodes characterized by Houle (1961) and Tough (1971) discussed above. This aspect of SDL has most often been studied descriptively as a means to better tailor adult education instruction for the explicit purpose of fostering personal autonomy.

3) Learner control is the result of instructional principles encompassed within SDL as they are utilized in formal educational settings.
4) Autodidaxy is SDL characterized as educational endeavors pursued in noninstitutional, 'natural societal settings.'

While each is an important conception leading to better understanding of certain aspects of SDL in particular contexts, these four foci are not copasetic and have lead to misunderstandings which attest to the complexity of the concept (Brockett & Hiemstra, 1991; Candy, 1991; Merriam & Caffarella, 1991). If SDL is a personality characteristic to what extent can it be manipulated for furthering goals within educational institutions? If SDL is self-management, how can pedagogical principles be applied to it? Additionally, if autodidaxy is SDL outside of educational institutions how are the findings to be utilized within more formal structures? Adding to this complexity is the plethora of process models developed out of research with divergent methodological considerations as well as the conflation of the goals and means of education. Is SDL the means to more efficient learning of institutional goals, or is it the goal of these institutions to produce self-directed learners?

The present day picture of the process of SDL is a product of these differing conceptions and methodological approaches. In order to better understand one aspect of SDL, the following discussion will focus on the process as investigated by researchers within different contexts but who broadly conceive of SDL within Candy's definition of autodidaxy. The discussion is organized around common elements from this diverse research base which are important for their interrelationships with Dewey's concepts as well as for their bearing on the 'informal curriculum'.

The first models designed by Tough and Knowles were formulated from a formal educators viewpoint. Their models include linear stages leading from establishing climate to defining needs and making goals and from appropriate learning strategies to evaluating learning outcomes (Knowles, 1984; Tough, 1971). It was assumed in the early study of SDL that existing understandings of teaching and learning could be utilized to conceptualize SDL. This important work is focused on the self-management component of SDL and thus is crucial to understanding the historical genesis of SDL conceptualization. Earlier work helps contextualize the meanings attached to this integral concept, and the focus on autodidaxy will necessarily still contain deposits of meaning from the other three definitions. While the four foci Candy (1991) delineates help clarify our understanding of SDL, these can never truly be separated completely. Given the interrelations of the four foci however there is "something incongruous about attempts to enhance the ability of learners to function outside the structures of formal institutions from within the institutions themselves" (Resnick, 1987, p. 18). These differences in the 'natural societal setting' make it difficult to conceive SDL with existing research from within institutions, and lead many researchers to conceive autodidaxy not as a model of teaching or learning but rather on its own terms (e.g. Candy, 1991; Roberson & Merriam, 2005). Even though the present discussion will focus on autodidaxy we must not forget the connections of the four foci nor the debt owed to earlier understandings which still give contextual meaning to later vestiges. The present interpretations of autodidaxy will now be explored for their common elements important to the present discussion of informal learning and the curriculum it constructs.

The first conceptual point from literature focusing on autodidaxy highlights its qualitatively different nature. Educational research traditionally is based on a conceptual model that separates teaching, learning and curriculum in an attempt to better understand the processes by which each is affected and affects the others. Within the autodidactic setting, the person is seen as teacher, student and curriculum specialist. Additionally, autodidaxy occurs by definition outside of formal institutions. Based on the literature involving the study of learning in schools and outside of institutions, Resnick (1987) finds disparate characteristics focusing on cognition, reasoning, knowledge and competencies. Institutional schools focus more on individual cognition, pure mentation, symbol manipulation and generalized knowledge. However, similar to Lave and Wenger's (1991) conceptions of authentic peripheral participation, learning outside of institutions includes shared cognition, tool manipulation, contextualized reasoning, and situation-specific competencies.

This contextual, situation-specific nature is one factor that makes autodidaxy qualitatively different and Roberson and Merriam (2005) share similar findings in their reconstructive semi-structured interviews with older, rural adults. They develop a 'loosely organized series of events' as a model of the autodidactic process which highlights these same aspects of the autodidactic process. External and internal incentives arising from late-life changes result in interests and motivate the autodidactics to access unique resources. Systematic attention follows in which goals become a priority and adjustments are made in response to difficulties and obstacles experienced during the process. Eventually the series of events leads to a resolution for shorter autodidactic projects while more permanent ones increase in depth and scope and

continue the process. Through this model they highlight the situated learning that takes place in these autodidactic episodes and attest to its qualitatively different nature when compared to learning in formal institutions. The stress placed on late-life changes is partly a function of their older population, but it marks the importance of context in the 'natural societal setting' as an influence on interest, motivation, resources and outcomes. It is this close connection to context that is important in understanding how autodidaxy differs from more formal institutional schooling and why it must be studied on its own terms.

Closely related to the different quality of autodidaxy is the unpredictability of the pursuit and outcomes of these endeavors. Griffin (1981) utilizes an introspective design in the study of her own autodidactic episode resulting in broad categorical distinctions and an important overarching characteristic. The five dimensions include rational, physical, emotional, relational and metaphorical or intuitive. These dimensions overlap and result in a myriad of combinations which attests to the complexity of the autodidactic process. The overarching characteristic stressed in her conception is the interrelation of these dimensions and the resulting unpredictability of learning episodes. Thus, Griffin finds that there was no predictable order and the dimensions were active in random occurrences in an interdependent context. The autodidactic process cannot be conceived as a linear process, nor can it operate in an acontextual, ahistorical moment. In Griffin's model there is no sequence, but the separate dimensions and their interrelations attest to the unpredictability of interests, their pursuit and the outcomes. This same characteristic of autodidaxy is found in Leean and Sisco's (1981) research that used Tough inspired surveys followed by interviews of a subsample of undereducated adults. Like Griffin

they find autodidaxy to be highly idiosyncratic and non-rational processes result in unpredictable pursuit and outcomes. The unpredictability of pursuit and process many times is found to begin with a problem situation. While researchers assign differing levels of importance to the context of people's lives, they all acknowledge that autodidaxy is overwhelmingly initiated because of some problem situation.

Thus, the third component of autodidaxy discussed here is this organization of autodidactic learning around problem situations which in some of the literature is given primarily a motivational role. For example in Taylor's (1987) phase model arising from research in which she interviews six women and two men for a total of thirteen weeks, a disconfirmation phase transition occurs at the beginning of autodidactic learning episodes in which there is a "… major discrepancy between expectations and experience (p. 183). Resulting in a disorientation phase of confusion and withdrawal, Taylor theorizes that a phase of "naming the problem" moves the autodidactic to explore, reflect, reorient, share and then achieves equilibrium at the culmination of the episode. This focus on problem situations arising from the 'natural societal setting' (Resnick, 1987) or the stage of life (Roberson & Merriam, 2005) adheres with common sense, but is nonetheless an important component of autodidaxy. Additionally, not all researchers assign this component to an early motivational factor in the process, but assign it much more importance.

Spear and Mocker (1981, 1984) utilizing reconstructive interviews also find autodidactic endeavors proceed in unpredictable directions arising out of problem situations. However they argue that the problem situation contains the logic for subsequent action. Echoing Griffin and others (e.g. Roberson and Merriam, 2005) the

idea of an ‘organizing circumstance’ reverberates throughout the literature on autodidaxy. The context at one point in the autodidactic experience is conceived as the circumstances surrounding the problem situation, the background experiences of the autodidactic, and random events that impact this point in time. This context then becomes the basis for subsequent action resulting in the next point in the autodidactic experience. Thus, Spear and Mocker’s understanding encapsulates the problem situation (Taylor’s ‘disconfirmation phase transition’) as well as the heuristic manner in which autodidactics proceed. According to Danis and Tremblay’s (1987) detailed content analysis of reconstructive interviews, autodidactics “… proceed in a heuristic manner within a learning approach which they organize around intentions, redefine and specify without following any predetermined patterns” (p. 139). Similar to Griffin’s interrelationships which make autodidactic endeavors unpredictable, the complexity is organized by autodidactics utilizing the ‘organizing experience’. Thus, the three components of autodidaxy discussed thus far (qualitatively different, unpredictable pursuits and outcomes arising from problem situations) are given explanatory value through this concept of the ‘organizing experience’ that goes far beyond entry motivation and instead asserts that the ‘organizing experience’ combines with idiosyncratic autodidactics (discussed later) to pursue the ensuing interest through the resulting logic. Additionally, it highlights the fourth component in this discussion of research that specifically highlights the autodidactic process.

Along with the 1) qualitatively different nature, 2) the unpredictable interests and pursuits 3) arising out of problem situations pursued heuristically, the ‘organizing experience’ heightens our attention to the 4) social context in which autodidaxy takes

place. Too often the autodidactic process is construed as a solitary activity occurring in a vacuum. However much of the research attests to the social context in which autodidaxy occurs and facets of this context have received increasing attention within the scholarly community. One of Griffin's dimensions stresses the 'interdependent' nature of many autodidactic endeavors, and many other researchers have catalogued the type and quality of assistance sought by autodidactics (e.g. Tough, 1971; Candy, 1981).

In Taylor's model introduced above, the exploratory phase is marked by collaborative efforts in which other people are viewed by autodidactics as especially important. From librarians to friends, family to available experts, autodidaxy does not occur in isolation but is pursued collaboratively at multiple points in the process. Taylor finds that in the phase transition of 'sharing the discovery', autodidactics sought out knowledgeable people with whom they tested their new understandings. This is similar to Lave and Wenger's (1991) authentic peripheral participation whereby novices learn the context and content, the grammar and substance, of communities of practice by involving themselves in the ongoing conversation of important concepts and problems in socially prescribed avenues.

Additionally, Roberson and Merriam's (2005) model, while highlighting the late-life changes of their research population, also attests to the social context of people's lives as a major factor in autodidaxy. They refer to a 'catalyst' which combines this collaborative component of the autodidactic process with that of motivation. The catalyst, "…some external event or person who encourages the participant to continue learning," can occur at any point in the autodidactic process (Roberson & Merriam, 2005, p. 283). Assistance, collaboration, motivation and testing of information all indicate the

importance of the social context for the autodidactic process. Thus, problems arising for the 'natural societal setting' in which autodidaxy takes place is unpredictable and qualitatively different in part because of the social context and resulting chance encounters this context encompasses, as well as the people and experiences deliberately sought by autodidactics.

How one goes about organizing experience and deliberately seeking out people and events however appears to be partly a function of previous experience and family background. The fifth component of autodidaxy common in the literature is the impact of past experience and family background in the way problems are defined, organized and pursued. Leean and Sisco (1981a) highlight the environmental and contextual factors in autodidaxy and discuss the importance of past experiences in organizing autodidactic endeavors. Consequently, the contextual factors include those idiosyncratic experiences of each individual and make generalizations of autodidaxy difficult. Spear and Mocker (1984) agree with Leean and Sisco's assessment: "The importance of past experiences and family background was found to be significant in the content and motivation for (autodidactic) learning, as well as in approaches to learning and problem solving" (Spear & Mocker, 1984, p. 19). Family background and past experiences not only influence the content of learning, but autodidactics motivation for learning. Thus, while 'catalysts' (Roberson & Merriam, 2005) and perceived value (Garrison, 1997) influence motivation during autodidactic endeavors, the family in which one develops is purported to have a direct impact on people's willingness to engage and persevere in these endeavors.

Additionally, autodidactics 'rational' (Griffin, 1981) approach to solving problems and their approach to learning is also influenced by the family and their past

experiences. These notions of problem solving and learning make intuitive sense for as Hâyrynen and Hâyrynen (1980) remind us, "(t)hinking does not actually start until previous abilities prove insufficient. Thinking, thus, is a total process in which a person formulates his (sic) situation and creates conditions for oriented learning" (p. 8, quoted in Candy, 1991). When habitual patterns are insufficient for overcoming problem situations, the autodidactic literature finds people organize their approach, their learning and their problem solving on those past experiences they believe to be most like the existing situation, and these experiences are profoundly influenced by family background.

The previous five components of autodidaxy highlight the contextual factors involved and thus seem to stress the limits of autodidactic agency. Autodidactics are: involved in a qualitatively different process from more formal institutions; engaged in an unpredictable enterprise; reacting to a problem situation arising from the 'natural societal setting' and heavily influenced by the context in which this problem occurs; reliant upon other members of their social world in pursuit of its resolution; and their motivation, organization of the problem, and approach to gathering resources and solving the problem are influenced by past experience and family background. The focus on the context of autodidaxy seems to deny any agency within autodidactic endeavors.

Conversely, Danis and Tremblay (1987) find that "self-taught adults take advantage of any opportunity that random events may offer them in order to learn" (p. 139). Far from being 'victims of circumstance' they find autodidacts open to learning in all types of situations and very adept at seeking out experiences that cross germinate with context and random events to produce unique pursuits and outcomes. Additionally,

utilizing concepts of metacognition and metalearning, Danis and Tremblay (1987) report instances whereby autodidacts realize their habitual patterns of pursuit and take conscious control in order to further their endeavors. Candy (1991) theorizes that "…there appears to be the same sort of fusion of intention and response, of action and reflection, captured by Freire (1972) in the term *praxis*, and this in turn seems to be mediated by some higher-order process such as metalearning or metacognition" (p. 171). This 'higher-order process' theorized by Candy, the 'rational' dimension identified by Griffin, the 'organizing experience' proposed by Spear and Mocker, and the reflection alluded to by Taylor all suggest that the control of habitual patterns of pursuit is an important component of autodidaxy. Thus control is obviously well documented and attests to the agency involved in autodidaxy even though environmental and contextual elements also affect the autodidactic endeavor.

The last component of autodidaxy discussed here displays the interrelationship between autodidactic agency and the environmental and contextual factors. In the earlier models of autodidaxy (e.g. Tough, 1971) developed within formal adult education, it was assumed that because learners were self-directed they would start with specific goals for their autodidactic endeavor. However, a surprising finding of later research is that goals are not clearly identified at the beginning and in fact change in response to a multitude of factors. Spear and Mocker (1984) found that preplanning was rare and goals were not specific. Other than wanting to solve a problem arising from the 'natural societal setting', the autodidactics could not specify exactly what outcome they were pursuing. Instead a 'triggering event' began a process whereby autodidactics continuously reevaluated the problem in light of furthering developments- some of which were

consciously sought while others happened surreptitiously. Thus they actively utilized their environment, context, past experience, family background and a multitude of human and nonhuman resources to pursue and redefine goals and interests in light of their utility in solving a constantly redefined problem situation. The 'organizing experience' is at the nexus of autodidactic agency and the environmental and contextual factors discussed above, so that goals evolve as the endeavor proceeds from activity to activity. It is the constant work of definition, redefinition and synthesis in light of previous action that adds to the unpredictability and qualitatively different nature of autodidaxy. In fact, Taylor (1987) found that autodidactics were not able to pursue their interests until they were able to act *without* certainty. This is in marked contrast to conceptions of formal education today, as well as previous ideas of the autodidactic process, and many of the autodidactic process models have had difficulty accounting for this important facet.

For people working within formal educational institutions it is difficult to conceive of "learning" (autodidaxy) without instantly thinking of teaching and curriculum. We are now confronted with research that suggests autodidactics are:

1) involved in a qualitatively different process compared to more formal institutions;
2) engaged in endeavors with unpredictable pursuits and outcomes;
3) reacting to a problem situation arising from the 'natural societal setting' and heavily influenced by the context in which this problem occurs;
4) reliant upon other members of their social world in pursuit of its resolution;

5) influenced by past experience and family background which specifically impacts their motivation, organization of the problem, and approach to gathering resources and solving the problem;

6) cognizant of their habitual patterns of pursuit, taking advantage of every opportunity to learn and actively engaged in seeking out new experiences;

7) engaged in pursuit of ill-defined goals and interests in light of their utility in solving a constantly redefined problem situation.

The discussion turns now to the connections between Dewey's notions of knowledge, interest and discipline and findings from the autodidactic literature in order to frame possible understandings of how children develop and pursue interests within the informal curriculum and how they engage with rationalized subject matter.

2.5 SHARED UNDERSTANDINGS: DEWEY AND AUTODIDAXY

The qualitatively different nature of autodidaxy compared to more formal institutions resides in cognition, reasoning, knowledge and competencies. Recall that Resnick (1987) characterized formal institutions as valuing individual cognition, pure mentation, symbol manipulation and generalized knowledge. Focusing on Dewey's conception of knowledge along the 'experiential continuum' there is a dearth of connections that link immediate, vital experience with the rationalized subject matters. Individual cognition disregards the social nature of knowledge at the generative level and leaves little room for developing the discipline needed to work as a member of a group.

Pure mentation skips the 'how to do' experience that is the basis for the internalization of concepts that go beyond simply "school knowledge." Symbol manipulation denies the human experience which is the context of knowledge generation. Devoid of any connection to human experience this "school knowledge" does not become subject matter as it is not 'reckoned with' in the context of a problem situation. Thus, generalized knowledge is the reified outcome of this divorce from human experience and the attendant problem situations that turn knowledge into subject matter.

Conversely, Resnick's characterization of non-formal learning (autodidaxy) stresses shared cognition in which the social generation of knowledge is explicit and the discipline of working in a group is usually a daily reality. Tool manipulation is respected and knowledge of 'how to do' is inherent in the work making the connections along the experiential continuum numerous and explicit. Contextualized reasoning is valued as the environment supplies the problems and many of the resources with which to overcome them. Situation-specific competencies replace generalized knowledge as 'how to do' knowledge is brought to bear on experiential problems informed by rationalized subject matter that becomes relevant in a particular situation. Dewey's conception of knowledge and its connections all along the experiential continuum appear to be operating well in non-formal learning contexts, including Roberson and Merriam's (2005) work with older, rural adults. Their finding of the importance of context in the 'natural societal setting' also stresses the 'organic connection' between 'how to do' knowledge with socially communicated and rationalized knowledge. This connection in their work arises out of late-life changes, and shows the importance of contextualized reasoning and situation-specific competencies in light of experiential problems. This attention to context and

connection to experiential problems seems to be the type of educative experiences Dewey describes (e.g. 1960).

The unpredictability of pursuits and outcomes is also a feature gleaned from the autodidactic literature that shares an affinity with Dewey's stress on the child as part of the educative experience. Griffin's (1981) interrelated dimensions and Leean and Sisco's (1981) idiosyncratic, non-rational processes attest to the prevalence of unpredictable pursuits and outcomes. Dewey begins with the child and the curriculum as two points along a line that is the educative process. As teachers pyschologize the curriculum in light of rationalized subject matter children's interests are steered, but strict objectives are impossible. The fact that the child's interests, their dawning capacities of self-expression, are all there is to the child makes the educative process an unpredictable enterprise. While rationalized subject matter is the lens through which teachers are implored to interpret these 'dawning powers', the exact path and outcome cannot be planned without each child's interests in mind making for highly idiosyncratic pursuits and the possibility for a wide array of outcomes. Additionally, the 'internalization of worth' in Dewey's conception of interest allows for socially negotiated meanings. Thus, the prominence given to interest in both Dewey's conception and the autodidactic literature attest to the inherently unpredictable nature of educative experiences. However Dewey was quick to point out that these interests are not to be interpreted as ends in themselves, and the autodidactic literature finds that interests are almost always organized around problem situations which 'spur' people forward in their utilitarian interests to overcome problems.

Problem situations arising out of the context of experience in the autodidactic literature, whether it be Taylor's (1987) disconfirmation phase or Spear and Mocker's (1984) organizing experience, share a natural connection with Dewey's formulation of knowledge, interests and discipline in educative experiences. While Taylor focuses on the motivational aspects of problem situations that are copasetic with Dewey's connection to the experiential continuum, Spear and Mocker attest to the importance of the organizing experience as containing the inherent logic for subsequent steps. This is the equivalent of Dewey's notions of the end suffusing the means and leading to the culmination of acts which lead to further acts. The 'loosely organized series of events' (Roberson & Merriam, 2005) are connected through the end-in-view. Suffused with genuine interest due to attention to means in light of the end-in-view, autodidactics proceed heuristically (Danis & Tremblay, 1987). Thus, the place of interests, means and ends explain the findings within the literature that autodidactic endeavors: are qualitatively different due to alternative conceptions of knowledge and the experiential continuum; result in unpredictable pursuits and outcomes due to the importance given to interests as the 'dawning powers' of self-expression; and, revolve around experiential problems resulting in ends suffusing means and generating the inherent logic to proceed.

The social nature of Dewey's tri-partite conception of knowledge, as well as the importance placed on social endeavors for the development of discipline, make connections with earlier conceptions of autodidaxy difficult. However beginning with Griffin's (1981) interdependent dimension and with later documentation of assistance (Spear & Mocker, 1984), catalytic motivation (Roberson & Merriam, 2005), collaboration, and the testing of information (Taylor, 1987), the social context of

autodidactic endeavors is well established. Explanatory models, though not causal, need to be added to these descriptive works and Dewey offers a lens through which to view the social activity surrounding autodidaxy that stresses the social nature of knowledge as well as the discipline attained through assistance and collaboration with others. Authentic peripheral participation (Lave & Wenger, 1991), with which autodidactic endeavors at times equate, recognizes the social nature of knowledge, the discipline attained through working with others, as well as the grammar of "standpoint, outlook, method" (Dewey, 1980a, p. 22) offered by rationalized subject matter being used to solve problems. Thus autodidaxy could not proceed in a social vacuum even if non-human resources are used exclusively because knowledge is socially generated in problem contexts imbued with social significance. However, this social dimension to autodidaxy is not limited to knowledge, assistance and collaboration, but extends backwards in time as people operate in a historical, cultural moment based on past experience framed many times by early family experiences.

Dewey asserts that informal, incidental knowledge is our 'most deeply-ingrained knowledge' and that all other knowledge is simply appended to it. This is why many researchers attest to the importance of past experience and family background in autodidactic endeavors. Leean and Sisco's (1981) idiosyncratic approaches to problem situations result from the significance people place on past experiences and family background. Thus, how one approaches a problem is partly due to what perceived similarities it shares with previous endeavors usually framed in the family setting. This is the contextual dimension which interacts with the environment and the organizing experience to direct logical action in subsequent steps (Spear & Mocker, 1984). While

autodidactic researchers have attempted to construct the process through which people pursue their interests, due to its emphasis on adult education there is little known of the development of how children frame their experiential problems as well as the social aspects to this development.

The autodidactic literature asserts that people take control of their own habitual patterns of pursuit in order to further their endeavors (Danis & Tremblay, 1987). However, metacognition does not offer a satisfying explanation of the process by which this is done, nor does it offer any explanation of how these processes are developed. Dewey however offers a cogent explanation of this process through pragmatist notions of ends and means, as well as an imbedded understanding of rationalized subject matter which attempts to reconcile the description of taking control of habitual patterns with the development of this process. Autodidactics not only take advantage of any opportunity to learn, but genuine interest entails a focus on the means that are suffused with the desired end. The habitual patterns of pursuit are the means by which the end is attained, and thus in order for people to act 'intelligently' they must have the end-in-view. Acting with an end-in-view, an aim, is acting intelligently whereby people base subsequent actions on the organization of observations and capacities in light of this aim. Additionally, Dewey points out that early childhood is marked by an immediacy of means and ends. Play is used as an example of immediate interest whereby there is no demarcation between ends and means. Thus, we would expect that educative experiences would develop the adult ability to pursue distant ends. Framed in this context, additional questions are raised about the unschooling environment in which ends and means are situated around children's interests. The unschooling family offers a fitting context in which to explore

the development of distant ends, the associated means and the place of rationalized subject matter in this process. However, this raises the most troublesome finding from the autodidactic literature which must be addressed if the explanatory power of Dewey's conceptions is to be salvaged.

Spear & Mocker, as early as 1981, attest to the unplanned nature of autodidactic endeavors and stress the environment and random factors in their description. This finding is also discussed by Taylor (1987) in which she asserts that the autodidacts she researched were not able to pursue their interest until they were able to act *without* certainty. At first this appears to be a contradiction to the pragmatist framework espoused by Dewey. However upon closer examination it is clear that even though ends were not well defined by autodidacts in the early stages of their endeavor, there are indications that they operate on ill-defined conceptions so as to organize their experiences which provide the context for further action. The aim, as mindful action with ends-in-view, must take account of the circumstances which are ongoing. In other words, the aim itself is under constant revision and not fully formed because it is altered by the intrinsic continuity of action. This is the explanatory power of interest and 'to be between.' The environment and its 'hard facts' are always present and influence every step in the continuity of action. As endeavors are pursued the aim is never divorced from the surrounding environment, and the interaction of people with their environment is the surrounding context of these endeavors. While observation, selection and capacities are ordered by the aim, humans' ability to reflect on experience as well as the aim ordering that experience, means the aim is only a 'warranted assertion' open to redefinition and suspension.

Dewey's notions of knowledge, interest and discipline within his pragmatist philosophy offer powerful explanations of the important findings from the autodidactic literature. From these bodies of work, we have concepts and ideas of how people attempt to solve problems that arise from the 'natural societal setting'. We have rough approximations of the process whereby adults order their experiences, and the implications of how these orderings influence subsequent action. However, from these explanations important questions surface which can be explored in the unique context of unschooling families. Operating from the vantage point of the child, interests are an important construct to these families. The development of interests and what types of knowledge they lead to are important to understanding the informal knowledge deemed so crucial by Dewey and autodidactic researchers. The place of means and ends-in-view include an important constellation of concepts that can be explored in the developing competencies of children in unschooling families. Family background and past experience can be studied as it impacts the children to try and map the process by which people's 'habitual patterns of pursuit' are formed. All of these questions are intimately tied to the overarching dilemma of children developing in a familial milieu which, according to Dewey, no longer offers the experiences needed to make sense of rationalized subject matter. Thus, the questions at the outset of this discussion remain:

- How do young autodidactics construct and engage the informal curriculum?
- What are their experiences with rationalized subject matter?

Chapter Three: Research Methodology

The purpose of this study is to explore how young autodidactics construct and engage with the informal curriculum and the place of rationalized subject matter in its pursuit. Unschooling families offer one of the few settings in which to observe this construction and engagement without clear institutional influences in children of "school age." The dominance of formal educational institutions and their explicit guidance in the form of curriculum and pedagogy through texts and teachers disallows most settings for these types of questions to be explored. I am interested in these contexts of informal education and the possibilities they offer for understanding alternative curriculum constructions and what it means to get an education in the complex society of The United States at the beginning of the 21st Century. The principal questions guiding the present research include:

1) How do young autodidactics construct and engage the informal curriculum?
2) What are their experiences with rationalized subject matter?

The research questions guide the methodology and thus the complex interrelationships of methods, context and framework organize this chapter. After a discussion of the need for qualitative research methodology in light of the questions and theoretical commitments, an explanation of the theoretical framework will help to situate the methodological techniques chosen for collection and analysis in this interpretivist case study. Additionally, the context will be highlighted throughout the following section as it impacts the techniques deemed most trustworthy for an emic understanding of the case. I explored the research questions by focusing on children of "school age" within families who are self-avowed unschoolers and were amenable to my research program

needs including interviews, observations and 'think aloud' interviews. These questions and the context of their exploration are suited to qualitative research which

> … involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2005, p. 3).

The meanings the autodidactics construct as they engage in their endeavors is of utmost importance if we are to understand the significance they attach to interests, the sense they make of their pursuit and the ways they utilize and interpret rationalized subject matter.

Instead of dissecting phenomenon in order to control certain variables in an attempt to causally explain, "(q)ualitative researchers treat the uniqueness of individual cases and contexts as important to understanding. Particularization is an important aim, coming to know the particularity of the case" (Stake, 1995, p. 39). Thus in sampling, collection, analysis and reporting, the wholeness of the phenomenon was sought specifically for its particularity. Merriam (1998) provides five characteristics of qualitative research in which a discussion of the epistemological commitments and assumptions of this constructionist study are situated. Qualitative research seeks an 1) emic perspective in which the 2) researcher is the instrument involved in 3) fieldwork and lead by 4) inductive, flexible an emergent analysis resulting in 5) thick, rich descriptions of the phenomenon.

Unschooling children in their natural societal setting are explored in an attempt to delineate the process of autodidaxy in younger people, as well as the meanings these children attach to interests, their pursuit and the place of rationalized subject matter. Thus, the goal of the study was to "… provide perspective rather than truth…" -

understanding as opposed to explanation (Patton, 1990). Sought here was not a causal explanation of the informal curriculum, but rather to understand its wholeness as it arises from interaction between subject, context and environment. Qualitative research is suited to studies that seek emic perspectives in order to understand a phenomenon in all of its wholeness. This means the emic understandings of the subjects themselves were accessed because they represent the significant space from which subjects act. Discussed further in the next section, the emic perspective enlightens action in that 'warranted assertions' allow subjects to signify subsequent action- 'whatever works is truth.' This ontological position supports the experiential, interpretivist epistemology of the study and highlights the importance of accessing the emic perspectives of unschooling children.

In order to access these perspectives which focus on contextual meaning, qualitative research "requires a data collection instrument that is sensitive to underlying meanings when gathering and interpreting data" (Merriam, 1998, p. 1). Human researchers enmeshed in the context of fieldwork are best suited as a responsive, adaptive instrument intimately involved in the construction of meaning. Thus a constructionist epistemology (Crotty, 1998) is assumed in this interpretive qualitative research that not only seeks emic perspective, but calls for the sensitive human instrument to be situated within the context of an unschooling environment. "What constructionism claims is that meanings are constructed by human beings as they engage with the world they are interpreting" (Crotty, 2003, p. 43). The meanings and representations attached to interests, their pursuit and rationalized subject matter can not be ripped from the context, but must be understood within the wholeness of the phenomenon. Not due to the 'natural' meaning inherent in the objects of interaction, but rather because objects of interest

contain the pregnant meanings out of which subjects construct meanings which in turn affect their subsequent actions.

Consequently the theoretical framework discussed in chapter two and summarized below is not intended to provide testable hypotheses, but instead represent beginning understandings that framed the collection and analysis of data. "Qualitative researchers build toward theory from observations and intuitive understandings gained in the field" (Merriam, 1998, p. 7). While Dewey's insight into the nature of knowledge, interests and discipline in the context of educative experiences and the adult education literature on autodidaxy are important as beginning understandings of the phenomenon of unschooling, "dependent variables are experientially rather than operationally defined" (Stake, 1995, p. 41). In other words, the beginning understandings of the phenomenon framed the initial process of data collection and analysis, but relevant constructs arose from the fieldwork and were intuitively grasped for their importance in understanding the phenomenon. "All research is a search for patterns, for consistencies" (Stake, 1995, p. 44). Patterns arose from the data in the form of themes which were categorized in ongoing analysis of relevant constructs from prolonged exposure to the context and subjective meanings of the participants always limited by the researcher's ability to interpret.

Finally, in order to provide a check on the limited ability of researchers, to improve trustworthiness and to disseminate the emic perspectives of participants in their wholeness, this qualitative research resulted in thick, rich description of context, constructs and interpretive analysis. The descriptions take the form of narratives with large quotes from participants. "Qualitative research uses these narratives to optimize the

opportunity of the reader to gain experiential understanding of the case" (Stake, 1995, p. 40). Particular description, general description and interpretive commentary were layered in order to provide readers with emic perspectives, contextual explicitness and construct relevance, as well as the analytical progression of the researcher. All levels were included in order to guide the reader along the patterns grasped by the researcher resulting from their experiences with the subjects imbedded in the wholeness of the phenomenon. Thus, the study utilized qualitative methodology due to constructionist commitments that best match the research questions, the context and the assumptive world of the researcher. In this chapter, a summary of the theoretical framework will be followed by case study design, data selection and analysis, and then turn to trustworthiness and researcher positionality.

3.1 CONCEPTUAL FRAMEWORK

Dewey's pragmatic philosophy focusing on knowledge, interests and discipline, as well as the autodidactic literature arising from adult education framed this study's etic preliminary understandings of the phenomenon. With the groundbreaking research into the informal curriculum by Thomas & Pattison (2007) providing the beginning context for utilizing this framework, the study sought emic understandings of the process including the personal significance of interests, the conceptualization of their pursuit and the ways autodidactics make sense of rationalized subject matter. Thus, the framework allowed the use of Deweyen concepts such as interests, knowledge and discipline as they related to what we already know about autodidaxy in adults. This constellation of concepts and their interrelationships were brought to bear on a unique context in order to

better understand autodidaxy in children, the informal curriculum and the place of rationalized subject matter.

Dewey's epistemological assumptions resulting from the 'warranted assertions' ontology of his pragmatic philosophy are integrally related to his conception of knowledge. This 'experimental theory of knowledge' imposes epistemological commitments that include Dewey's tri-partite conception of knowledge along the experiential continuum and shares affinity with Resnick's (1987) characterization of learning outside of formal institutions. 'How to do' knowledge, communicated knowledge and rationalized subject matter stress the importance of shared cognition and tool manipulation discussed in Resnick's characterization, and the importance of the 'organic connection' (Kliebard, 2006) between knowledge along the experiential continuum. The mapping of these connections is important to understanding knowledge construction in autodidactic endeavors, and thus the lens of Dewey's notions surrounding the nature of knowledge in relation to the autodidactic literature was an important analytical tool utilized in this study. Additionally, the use of Dewey situates this research within his pragmatist philosophy and the attendant constructionist epistemology was utilized to 'construct the constructions' as young autodidactics travel and make connections along the experiential continuum.

In addition to knowledge, interests are an important concept arising from the limited research into the informal curriculum. Thomas & Pattison (2007) attest to the importance of children's interests in constructing the informal curriculum as they report the reconstructive interviews of parents:

> Lego is a huge interest. He has quite a bit of Lego. It's what he does with it. First he gets books of aircraft, military or civilian, not models but actual pictures and he models them from Lego. No one tells him to make 3D models of different aircraft and so on. He models them and compares them back to the picture and if he likes them he photographs them and puts them in his collection (8) (p. 40);

and,

> I don't know where the interest in astronomy came from. It just cropped up and we've followed his interest. Even [his] Grandma looks out for newspaper articles about the planets, new ones that have been discovered (p. 41).

Thus, interest is an important concept according to the parents of unschooling children, and the theoretical lens of Dewey's notions was brought to bear on the emic perspective of children sought in this study. Additionally, Dewey's notions of interest within his pragmatic philosophy (e.g. Dewey, 1961; Pring, 2007) are further situated by the autodidactic literature which attests to unpredictable (Griffin, 1981; Leean & Sisco, 1981), unplanned endeavors (Spear & Mocker, 1984; Taylor, 1987) focusing on problem-situations arising from the natural societal setting (Resnick, 1987; Roberson & Merriam, 2005). These autodidactic endeavors occur in the context of an 'organizing experience' (Spear & Mocker, 1984) in which 'contextualized reasoning' (Resnick, 1987) results from the ends-in-view no matter how ill-defined (Taylor, 1987). This conceptual lens through which to view the interests of young autodidacts and the meanings attached to them offered the possibility of emic understandings of the construction of the informal curriculum, its engagement and the place of rationalized subject matter.

Alluded to in the first parent quote above, the discipline of an interest is an important component in understanding the pursuit of interests. The 'Lego' child appeared to compare his models to the pictures in an attempt to distinguish this model's alignment with socially constructed parameters. Again, Dewey in conjunction with

autodidactic literature provides a fitting lens through which to analyze unschooling children and the meanings they construct as they pursue their interests. The place of "standpoint, outlook, method" (Dewey, 1980a, p. 22) in the social dynamics of autodidactic endeavors is attested to in the literature (e.g. Roberson & Merriam, 2005; Taylor, 1987) and is similar to Lave and Wenger's (1991) conceptions of authentic peripheral participation. Additionally, Dewey's notions of aims as intelligent action is situated with Danis and Tremblay's (1985) finding that people proceed heuristically and take control of their 'habitual patterns of pursuit'. In the second quote above, a family member was acting as a catalyst and resource to further a child's interest in astronomy. Thus, the familial significance in regards to the pursuit of interests occurs at two levels: 1) as a direct 'catalyst' (Roberson & Merriam, 2005) in the pursuit of an interest; and 2) possibly as a mentor that affects the 'habitual patterns of pursuit'. Applying this social, disciplinary lens to the children's perspective of their own autodidactic endeavors aids our understanding of their pursuit of these interests.

The conceptual framework utilized by this study is a result of focusing Dewey's notions as they interrelate with the autodidactic literature from adult education and the context explicated by the ground breaking research into the informal curriculum by Thomas and Pattison (2007), as well as the specific curriculum iterations explored by Huber (2004) and Hornick (1993). Thus, the lens offered by this framework delimited initial collection and analysis to interests as understood by the students in relation to ends-in-view, the ways interests were disciplined as they occur in an environment of 'hard facts' and rationalized systems of knowledge, and the social context in relation to the pursuit of interests and their discipline. This framework was also a product of the

pragmatist, constructionist, interpretive stance explicitly followed in which ontological arguments are 'sidestepped' with 'warranted assertions', and epistemological assumptions include subjective understandings within contextual and environmental possibilities.

3.2 CASE STUDY DESIGN

This study has a natural affinity with case study design as the informal curriculum arises from the child in interaction with their 'natural societal setting'. A qualitative case study within an interpretive episteme offered a framework through which to explore the meanings young autodidacts construct about their informal curriculum as this inquiry "… focuses on meaning in context (which), requires a data collection instrument that is sensitive to underlying meaning when gathering and interpreting data" (Merriam, 1998). The origination of interests, their subsequent pursuit and the place of rationalized subject matter was little understood from the child's perspective, and thus this study sought an emic understanding in a unique context which "can reveal about a phenomenon, knowledge we would not otherwise have access to" (Merriam, 1998). The setting is unique and was chosen specifically for the experiences it allows.

The child, or young autodidactic, was the case in this study and represented the bounded system in which the phenomenon of the informal curriculum was constructed and engaged. "The case is a specific, a complex, functioning thing" (Stake, 1995, p. 2). Thus for every unschooling child, as a type from a class (Merriam, 1998), there arose the phenomenon of interests and their pursuit. Thus, this research is an *instrumental* case study (Stake, 1995) because the understandings generated are meant to inform broader

discussions of the autodidactic process in young people, as well as the place of interests and rationalized subject matter in education. Generalizability is not the goal; instead the generation of knowledge in context was highlighted in order to discuss education that is not general or universal. Part of the study's commitment to context is due to the fact that the family was integral to understanding the phenomenon and the case of the unschooling child. As such the family, as well as the cultural milieu in which they were embedded, represented the outer circle of the bounded system; the context from which the phenomenon cannot be completely separated (Yin, 2003). This particular phenomenon of the informal curriculum was congruent with case study scholarship because it was particular and focused on descriptive and heuristic devices. "This specificity of focus makes it (case study) an especially good design for practical problems- for questions, situations, or puzzling occurrences arising from everyday practice" (Merriam, 1998, p. 29) The informal curriculum arose from the interaction of *this* child, within *this* family, in *this* city, at *this* particular historical moment. As such, the thick, rich description resulting from this work sought to provide holistic, emic and ongoing interpretations of the phenomenon so as to facilitate the reader's heuristic understanding (Merriam, 1998). While the context attests to the applicability of case study design, the questions were also copasetic with this particular type of research.

1) How do young autodidactics construct and engage the informal curriculum?
2) What are their experiences with rationalized subject matter?

"Case study is a particularly suitable design if you are interested in process" (Merriam, 1998, p. 33). The unschooling child was involved in an autodidactic process in

constructing and engaging the informal curriculum and thus represented the focus of the this qualitative, interpretive case study.

3.3 PARTICIPANTS AND SETTING

Four children were purposively selected for this study based on "school age" and familial characteristics. The participants are self-avowed unschoolers in which education occurred in the natural societal setting resulting in interests pursued. The context of unschooling espoused earlier means that the parents did not "force" any particular subject matter or skills on their children and instead allowed the child's interests to define the what, how, why, when and where of the informal curriculum. Additionally, the children were unschooled their entire lives. This was an important parameter of selection because people who have been in a more formal educational environment usually retain aspects of these more formal institutions long after they have left the setting (Griffin, 1998; Holt, 1989; Stevens, 2001) As unschooling children allowed to self-direct their own learning, they allowed an opportunity to explore the research questions in one of the few settings available to capture the processes and contexts of "school age" autodidacts. Thus, children 1) ages 9-15 from 2) an unschooling family who have 3) engaged solely in unschooling was purposively selected so as to garner 'information-rich cases' (Patton, 1990) in order to collect data specifically related to the research questions.

Additionally, care was taken to recruit children from a wide range of ages in order to explore possible factors associated with age at work in the autodidactic process. Not to assert a linear progression or a developmental model, even though open to data that suggested this interpretation, but rather to attend to possible influences of age in

interaction with context that may have affected process or content. A sample with age variation, a type of "maximum variation" (Glaser & Strauss, 1967), allowed the possibility to attend to these factors. This was a unique and self-selected sample when considering all "school age" children; however the number of unschoolers available for study led to one of convenience.

I conducted the study primarily in the home of these autodidacts, following them into the wider community whenever their pursuits took them elsewhere. While parents were an important contextual element of the case, they were not the focus as much of the previous research on unschooling and home-education has attended to the parental perspective (Ray, 1999). Since each child was a case, the sample of four children can also be described as a collective case study (Stake, 1995) or multicase study (Merriam, 1998). Thus, the study was an interpretive collective case study with a convenience sample and sought the emic perspective of the young autodidactic as they constructed and engaged with their informal curriculum.

The family was comprised of two parents and four children. The parents were both highly educated, both with bachelors and the mother who stayed home with the children was a Harvard trained pediatrician while the father was employed full-time. The mother was Latina, the Father white and they lived an upper-middle class lifestyle with a four-bedroom house on a two-acre plot located on the outer edges of a metropolitan area. The children ranged in age from 9-15 and had never been to formal school. At the time of the study, Max was 9, Miranda 11, Will 13 and Jack 15. More contextual descriptions of the subjects are detailed at the beginning of chapter four.

3.4 DATA COLLECTION

"Data are not 'out there' waiting collection, like so many rubbish bags on the pavement. For a start, they have to be noticed by the researcher, and treated as data for the purposes of his or her research" (Merriam, 1998, p. 69). This section explains the data selection and construction techniques utilized in this interpretive case study deemed useful in light of the quality and scope of the focusing questions. Considering the emic perspective sought in regards to the meanings attached to interests and their pursuit within the informal curriculum, multiple data sources were utilized including interviews, observation, 'talk-alouds', parental reconstructive interviews, and artifacts related to past autodidactic endeavors. These data sources increased the credibility of subsequent assertions, findings and implications as well as occurrences of data triangulation (Merriam, 1998; Stake, 1995; Yin, 2003).

Interviews

Interviews are one of the most important data collection techniques in qualitative research when the goals include unobservable information. "We cannot observe how people have organized the world and the meanings they attach to what goes on in the world…. The purpose of interviewing, then, is to allow us to enter into the other person's perspective" (Patton, 1990, p. 196). Thus, the unobservable aspects of this research could only be obtained from interviews in which the subjects were asked specifically about internal processes and emotions so as to better understand how they made sense of their autodidactic endeavors, their pursuit and the place of rationalized subject matter. Because of the possibility of entering another's perspective, interviews are ubiquitous in qualitative research and range from highly structured to a complete absence of

predetermined questions. For the purposes of this study semi-structured interviews were utilized due to the need to access specific information related to working constructs, as well as the freedom to pursue follow-up questions related to emic descriptions and understandings. All interviews were audio-taped, transcribed and given to subjects for member checks. Three specific types of interviews with two different groups were utilized to gain access to different contextual elements related to the research questions.

Upon entering the site, one semi-structured reconstructive interview with the mother who was with the children the most was utilized to contextualize familial relationships as well as parental insight into the informal curriculum and rationalized subject matter (See Appendix). This type of data is similar to earlier studies (e.g. Thomas, 1998; Thomas & Pattison, 2007), and has been shown to yield valuable data about the informal curriculum and its engagement. All interviews were audio-taped, transcribed and member-checked for misunderstandings, commissions and omissions.

Three semi-structured, one-hour interviews (See Appendix) took place with each autodidactic in the first, third and sixth month of the intensive observation period. The first interview focused on reconstructive data in which questions started with "completed" autodidactic endeavors as well as ongoing endeavors in an attempt discuss emic meanings of interests and pursuit, as well as to contextualize later observations. The second interview focused on ongoing endeavors to follow any changing meanings of original interests and the interrelationships between interest, pursuit and engagement with rationalized subject matter. The last interview attended to completed endeavors since the inception of the study, and focused on subject understandings of how interests may have

evolved in their pursuit, how they determined the endeavor was completed and the sense they make of rationalized subject matter within the pursuit of interests.

Two "talk-alouds" per subject allowed for process mapping of ongoing autodidactic endeavors (Shavelson & Stanton, 1975). Also known as process tracing, this data construction attempted to get subjects to talk of their developing understandings as they were directly involved in an endeavor and highlighted the decisions they made as they proceed. Through this technique emic understandings were captured as they arose within the process of pursuing an interest. These talk-alouds were also audio-taped and transcribed so that developing questions could be addressed in the second and third semi-structured interviews. The process of autodidactic endeavors in younger populations had yet to be explored and this technique offered valuable data into emic contextual understandings.

Observation

Observations are common in case study methodology and offer an opportunity to view autodidactic endeavors in the natural societal setting out of which they arise and in which they are pursued (Merriam, 1998; Stake, 1995; Yin, 2003). Placing myself as an observer calls attention to the danger of ethical dilemmas and researcher positionality which will be discussed further below. "For all their intrusion into habits and personal affairs, qualitative researchers are noninterventionists. They try to see what would have happened had they not been there" (Stake, 1995, p. 44). Duration and number of observations were important to gain access to emic understandings while retaining the noninterventionist commitment.

Observations took place once to twice weekly, and one subject was usually the focus of observations for six weeks in order to immerse myself in the natural societal setting out of which their autodidactic endeavors arose and in which they were pursued. Additionally "talk-alouds" occurred within one endeavor for which interview and observation data were available resulting in better triangulation and a more holistic understanding of the emic understandings and significance attached to these endeavors.

Observations usually lasted four to six hours in order to gather insights into the natural societal setting, to increase the number of observed endeavors and to follow these endeavors as they progressed. Ongoing informal debriefings took place throughout observation periods in order to clarify my understandings of what was happening from the subject's perspective as well as to follow relevant constructs as they pertained to differing endeavors, however this was balanced with non-interventionism and mainly took place during lulls in the day. Immediately following all observations, field notes were reviewed and analytic notes completed which focused on initial reactions, emerging questions and tentative links to relevant constructs.

Artifacts

The primary focus of data collection was from interviews and observations. However, some interests resulted in artifacts which added complexity and depth to understandings of the pursuit of these interests. I attempted to collect photographic evidentiary data of interest pursuit which aided in triangulation and helped develop rough timelines of the interests themselves as they continued. Remembering the 'Lego' interest as described in Thomas and Pattison's data, the pictures, books and websites utilized as

the interest was pursued were valuable data in understanding the curricular dimensions of knowledge along the experiential continuum.

Data Analysis

One hallmark of qualitative research is the massive amount of data that results from such endeavors, and thus care was taken to manage this data in a rigorous fashion (Merriam, 1998; Stake, 1995; Yin, 2003). The digital format of interviews, transcripts, field notes, and memos were systematically organized using folders and hard copies utilized for redundancy and analysis. This organization was aided by analysis and collection that occured simultaneously (Merriam, 1998; Stake, 1995). "A qualitative design is emergent" (Merriam, 1998, p. 155). What emerged out of simultaneous collection and pursuit due to the iterative (Miles & Huberman, 1994) and ongoing (Yin, 2003) nature of qualitative research was the ability to follow and test developing understandings. "Analysis is a matter of giving meaning to first impressions as well as to final compilations" (Stake, 1995, p. 71). Impressions and their interpretive nature were rigorously pursued as analysis means taking these impressions apart and searching for patterns, bias and consistencies across data, episodes, categories, constructs and cases. However, analysis also refers to a process of connecting meanings in a heuristic process that benefits from analogy and metaphor (Stake, 1995). Thus, the constant comparative method (Miles & Huberman, 1994) was utilized in this study as an analytical project that proceeded from collection with ongoing interpretation, coding to categorization and then comparison detailed below.

A unit of information should be the smallest bit that can stand alone (Lincoln & Guba, 1985). Coding was the beginning process of categorization and these were kept electronically along with examples from interviews and field notes. The coded units were then categorized so as to express relationships between them in novel ways. "Category construction *is* data analysis…" (Merriam, 1998, p. 180 emphasis in original) in which units were brought together and categories became tentative constructions of understanding. Category constructions from one episode were then compared to other episodes (e.g. observation one with interview one). In this way, categories were tested for their relevance to research question, exhaustiveness, and sensitizing nature, as well as their ability to contain mutually exclusive divisions between units and conceptual congruence with other categories (Merriam, 1998). In this process, categories were further defined, merged and subsumed under other categories as these abstract understandings were constantly tested with further data collection and refinement. In this collective case study, attention focused on individual cases first before cross case analysis proceeded (Merriam, 1998). It was important to understand the processes and interrelationships within a case prior to attempting the cross case analysis (Miles & Huberman, 1994), however cases will inform each other so as to provide conceptual congruence of categories (Stake, 1995).

Thus, the analysis was simultaneous with data selection and construction. As categories were developed they focused attention during further collection resulting in better defined categories. Upon the completion of data collection due to saturation (Merriam, 1998; Miles and Huberman, 1994; Stake, 1995), formal analysis continued the refinement of categories and their interrelationships until a firm grasp of the processes

were understood. Finally, categorical relationships were compared across cases for processes which transcended individual cases and made the subsequent findings stronger (Yin, 2003). Additionally, the fact that multiple children were from the same familial setting made for productive cross case comparison as some of the contextual elements surrounding multiple cases were similar.

Validity And Reliability

Internal validity, external validity and reliability are contested spaces for all qualitative research. The following section explains the meaning of these concepts in relation to case study, and points to design elements specifically utilized to meet their requirements and increase the trustworthiness of this study's findings. Many of these elements have been discussed above in regards to study design and analysis, but a clear explanation of how these elements relate to reliability and validity will help keep clear how they work together to increase trustworthiness.

Internal validity relates to how well the findings of a study match reality, and thus the definition of reality is integral to understanding internal validity. "One of the assumptions underlying qualitative research is that reality is holistic, multidimensional, and ever-changing; it is not a single, fixed, objective phenomenon waiting to be discovered, observed, and measured …" (Merriam, 1998, p. 202). This holistic reality is constructed by humans in interaction with their environment- cultural, social, biological, etc…. Human beings, as experienced knowledge constructers, are an adept instrument to understand the ordered experiences of others. Since the ultimate goal of qualitative case study is to understand the case, the subjectivity of the human instrument is seen as a

definite strength (Lincoln and Guba, 1985). However, certain protocols and design elements increase scholarly rigor so that subjectivity does not lead to finding whatever one wants.

Merriam (1998) lists five relevant strategies included in this study that were meant to enhance internal validity:

> Triangulation- using multiple sources of data, or multiple methods to confirm emerging findings. Member checks- taking data and tentative interpretations back to the people from whom they were derived and asking them if the results are plausible. Long-term observation at the research site or repeated observations of the same phenomenon- gathering data over a period of time in order to increase the validity of the findings. Peer examination- asking colleagues to comments on the findings as they emerge. Researcher's biases- clarifying the researcher's assumptions, worldview, and theoretical orientation at the outset of the study (p. 204).

Observations, talk-alouds and interviews with parents and children offered the necessary data collection to provide triangulation. Additionally member checks were utilized after interviews and talk-alouds but were also used systematically throughout the study in order to check developing understandings. Long-term observations are always difficult due to resource allocation, but six months with four subjects provided for data saturation. Peer examination occurred mainly through the dissertation chair, a writing group of peers working on their own dissertations, experienced researchers with who contact has been made through conferences and correspondence as well as committee members. Researcher's bias has been introduced through the theoretical framework discussed in chapter two, but other biases of experience and positionality will be explicated in the following section.

The replication of findings, or reliability, is a more difficult issue for the social sciences and thus Lincoln and Guba (1985) as well as others (Merriam, 1998; Stake,

1995) have argued for consistency instead of reliability. Given the data collected others should agree that the findings are plausibly derived. Others can only agree of this plausibility if they are given access to the data and how they were collected and categorized, the logic of selecting informants and a thick description of them and the context in which they live, and ongoing triangulation from multiple data sources. These elements were present in this study and created an "audit trail" to convince readers of the consistency from data to findings (Merriam, 1998).

External validity is another difficult concept within qualitative social science research. Whether findings can be generalized to other situations depends on the context loaded with innumerable uncontrollable factors that account for process and findings. Within this rich context transferability replaces generalizability as readers were given enough thick, rich description and an audit trail in order to produce their own "naturalistic generalizations" (Stake, 1995). People naturally look for patterns and discern courses of action based on these naturalistic generalizations and thus description, including information on the typicality of the case and multisite cases, allowed the reader to act reasonably in accordance with the findings they believe to be applicable to their own 'cases'. This is the ultimate goal of case study reporting and the essence of the substitution of transferability for generalizability.

Limitations

While design elements that attend to validity and reliability increased scholarly rigor and the trustworthiness of this study, there are inherent limitations that must be foreclosed so as to amend ideas about the implications for this study. The sample was

small, not meant to be representative and was one of convenience. Great detail was given in the case study report, but the case is not intended to be typical of unschoolers. While many readers will want to compare the construction and engagement with the informal curriculum with their own experiences in formal educational institutions, no comparison group is possible. This study is not intended to compare these disparate avenues of education. An attempt has been made in the report to remind readers that the research was aimed at understanding this process so as to glean valuable insight into educational issues, but not as a means to bolster a specific type of educational system. The thick, rich description is one facet of this reminder, as it is very different from institutional schooling, however reader misunderstanding is always a limitation of case study reports (Stake, 1995).

Along with the small, nonrepresentative sample and possible reader misunderstanding, my own biases have stamped this study with its own limitations. What I chose to focus on, to collect, to relate and to disseminate are a function of my way of seeing. As Kenneth Burke observed, "A way of seeing is also a way of not seeing." My preconceptions, choices and relationships with those I study all influenced the pursuit of this endeavor, and I accept full responsibility for all omissions and commissions resulting from these biases. In an effort to fully divulge as many of these biases as possible, along with the theoretical framework with which I approach this study, the following section delineates the ethical considerations of this study and some of my experiences that framed my position in regards to this research project.

Ethical Considerations

It is a duty and an honor to be let into people's lives for the sole purpose of reporting their emic understanding to others. The honor is that members of the community allowed me to enter into the private moments of their lives, and then allowed me to ask them innumerable questions about their intent, understanding and consequences of their choices and actions. The duty is to report it in a way that does not betray this trust. Through study design and dissemination format I have attempted to portray their emic perspective, but care must also be taken to protect: the subject's anonymity; their personal space; and their own sense of meaning separate from the analytical constructions I have attempted to use in its dissemination. Member checks, triangulation, pseudonyms and the other strategies discussed above have provided safeguards against ethical dilemmas.

Researcher Positionality

I approached this study with excitement and trepidation. As a former secondary teacher in the southwestern United States, I have had countless opportunities to observe and take part in student learning through multiple curriculum iterations, pedagogical models and learning theories. Teaching for nine years in urban and suburban settings within public and private institutions in every grade six through twelve, I have had the opportunity to engage with children of varying strengths, goals, achievements and environments. These experiences have left their indelible mark on my character, my theories and my goals for education and life.

Additionally, upon entering graduate school at a large state university in the southwestern United States, I had the opportunity to work with pre-service teachers for

two years in which I co-taught the methods class and supervised their field work. The time to reflect on the practice of teaching, hear faculty express their own beliefs and the mission to engage pre-service teachers was a time of ultimate growth and refinement of theoretical commitments. All of these experiences inform my outlook and thus my position as I undertook this study.

As a parent involved in home-education with my own children, I have had the opportunity to step out of institutional schooling and view the intimate relationships between learning and living first hand. The product of a public school education myself, the reasons for my family's decision to home-educate are messy and ill-formed. As supporters of public education, our decision to home-educate rests on shifting ground. We did not make our choice because of the many critiques of schooling even when these resonate with my own experiences in formal education. We did not make our choice due to the supposed benefits of home-education. For our family the decision revolved around a discussion of trusting our children, making our own schedule and discovering a community. However, I do not come to this research as a proponent of 'unschooling' or any other home-education agenda. This site simply allows me to work through educational theories that have vexed me for over a decade. Learning of the existence of unschooling was a challenging opportunity for me to engage with differing constructions of the curriculum as well as what it means to get an education. Thus, I am grateful for the opportunity to explore these sites, and cautious of what I think I have learned.

Experiences at home and in the community have spurred my interest in the curriculum issues related to the informal curriculum. Experiencing this engagement with the informal curriculum from a parent perspective, hearing the related experiences of

other parents and trying to relate this to my own education, as well as that of my teaching career, has resulted in unexpected relationships of theories and concepts from home, classroom and community. Thus this professional undertaking with scholarly implications was also deeply personal. The children I worked with in this study were not from our home-education environment. However, my professional and personal worlds did collide during this study, and thus the theoretical framework, study design and protocols were immensely important in making this a productive, openly biased endeavor.

Chapter Four: Results

Exploring how young autodidactics construct and pursue their own curriculum as well as their engagement with rationalized subject matter offers a unique opportunity for educators to consider curriculum iterations outside of traditional institutions. Devoid of explicitly stated objectives and outlines of knowledge to be covered, the themes that emerged from this qualitative case study of autodidaxy offer an indication of the potential contained in the interests pursued by autodidactics. Elements of the self-constructed curriculum are labeled 'potential' due to the highly contextual nature of autodidactic endeavors, as well as the absence of any attempt to draw causal arrows or generalizations. The three themes of choice, goals and problem-situations are explored in the hope that a greater understanding of these autodidactics will allow for student interest to be utilized in different contexts with students from varied lived realities. The first narrative in this chapter will explore relevant contextual elements as well as biographies of the subjects. Following this contextual work, each theme will be explored through a short narrative broken into sub-themes with analysis at the end of each section.

In attempting to convey the gestalt that is the experience of research amidst the infinitely contextual reality of everyday life, I am humbled by my opportunity and overwhelmed by my task. At once enabled and shackled by linear exposition, the following narratives are an effort to express certain findings with as much contextual knowledge as possible. For six months I was privileged to share a few life experiences with this family, but what appears here is a feeble attempt to condense that experience in the hope that what I have learned from these autodidactics can help us better understand interests, how they are pursued and the possible connections to curriculum utilized in

different contexts. Included in the following narrative are snapshots of the four subjects as well as relevant contextual information.

4.1 CONTEXT: UBIQUITOUS KNOWLEDGE, MODULATED SUPPORT AND UNIQUE SPACES FOR DISCUSSION

In the following section contextual elements are highlighted that form the backdrop of autodidactic curriculum construction and pursuit. While difficult to parse out the relevant dynamics involved in the highly fluid experience of learning while in the flow of life, the following narrative attempts to portray these subjects in time and space while accentuating a few of the most germane contextual aspects for curriculum iterations and the place of rationalized subject matter. Within this narrative there are also biographies of the four subjects that help to situate the data points attributed to them out of which the three themes emerged.

Driving out of the urban landscape along a six-lane state highway, the first signs of old suburbia have met the encroaching urban sprawl of a large southwestern city. I was beginning my research with a family I'd met only twice before and I was nervous. Focused on my own expectations I tried to notice everything around me as all the questions from the readings and inquiries that led me to this point bubbled at the edges of my consciousness. 'Big box' stores started to intermingle with strip centers filled with nail salons, liquor stores, dry-cleaners and a restaurant that opened across from older four-story apartment buildings. After a fifteen minute drive out of the urban center, in an area passed over by developers of the newer suburbs, a major thoroughfare ran past a shady park, a complex of sport fields and a few older subdivisions with large tracts of undeveloped land in between. Creeping back behind one of these neighborhoods a dry

creek bed marked the boundary of long narrow, two-story wood apartments trying to look like houses and across the street were two-acre lots on which sat older homes converted into businesses. The third lot had a well-tended garden against a fence and a home sitting in the middle amidst sprawling oak and cedar trees.

Checking the address I turned onto a gravel road that meandered toward the house. As tires crunched over leaves littering the ground from the hundred or so trees, I noticed the natural grasses only prospered in a large swath of clearing near the paved road. Next to the house sat a large sandpit, two storage sheds and a small wooden cottage in the back corner. A large concrete pond with an orange 'warning' fence around it was behind the driveway in which sat a pile of lumber, a hay bale with a bull's eye attached, a basketball goal, small skateboard ramps, and an assortment of bikes and balls. Walking past a cooler, some folding chairs and a jumble of carved wooden swords, I knocked and was met by Max (9) along with two cats, one trying to get into the house and another trying to get out.

Max was the youngest with shoulder length dark, wavy hair, bright eyes, a quick smile and a snickering laugh that often shook his elfish frame. Perpetually barefoot he rarely sat for long and constantly attempted to engage his siblings in games and sports. "I'm interested in like card games, video games, board games, all of the strategy and skill, or what I think of as skill type games" (Max, interview, March, 24, 2009). Intimately connected to these 'skill type games' was Max's interest in 'epic' stories like *Lord of the Rings* and *Star Wars.* He talked excitedly about his ideas of 'epic' as 'really big endings where the fate of the world hung in the balance' and where 'people gave up their lives for their friends.' He said he shares this interest in stories with Jack and his

interest in sports with his siblings, Will and Miranda. However he was quick to point out that he had interests that they did not share and when seeking their advice looked more for ideas than for their opinions. His latest idea in this area was to write a play and perform it with friends at his house, and as part of his writing he often acted out the scenes. Admittedly aware of stories which 'copy others too much' he strove for originality and still looked to his favorites for inspiration. His wonderings ranged from security systems and the nature of gravity, to the properties of mercury and whether it could be used to make a real lightsaber. Max was an active nine-year old with a myriad of wonderings and involved in serious play in which he committed large parts of his day to creative and active endeavors.

As Max explained which cats are allowed outside we walked through a narrow entryway and past a converted garage in which sat a child sized table overflowing with drawings and an entire wall of cabinets filled with art supplies like an elementary schoolroom. Looking more carefully, I noticed towards the back of the room animal crates, large metal swords, an unstrung bow, some large pieces of leather and boxes stacked to the ceiling. Turning back to the left, a main living area was lined with bookshelves, two computers and bordered with entryway tables literally hidden by stacks of books, games, helmets and an odd assortment of leather pieces. Two couches sat in the center of the room and faced a large stone fireplace in which sat more books, toys and three large storage bins filled with Legos and board games.

Max led me to a room with large wooden tables in between the kitchen and the main living area in which we joined the rest of the family at the larger of two tables, the smaller one being completely covered by stacks of books. Miranda (11) was seated at the

table with her back to the sliding glass door which offered a panoramic view of the backyard. As she read the comics she dipped her finger in a cereal bowl and fed a third cat sprawled on the table next to the Times. Miranda shared an affinity for gymnastics with Max, was a self-avowed artist and loved to create dances out of the steps she learned in class 'putting the pieces together like a puzzle.' With long, dark straight hair, her eyes darted and paused as she talked quietly about her interests and wonderings. Most of the paintings and drawings at the small table in the converted garage were hers and she proudly displayed a silhouette piece she had entered in an art competition while still managing to hold a sheepish smile. At her dance class, she now felt comfortable enough to ask questions and talked eloquently about why she liked her present gymnastics class more than the 'not very serious homeschooler' one she took earlier. She talked of watching design shows with her Dad, and showed me model houses she had constructed so she could change everything from the paint on the walls to the floor plan. Intrigued by math and the roundness of the Earth, she explained parts of her theories and then caught herself, pushed her hair back from her eyes and self-consciously looked away. She spent hours at the 'art table' looking at books and experimenting with colors while breaks were often spent wrestling with her brothers in the 'sumo pit' in the backyard. Miranda was quiet on the surface and yet vibrantly punctuated with athletic displays of dance and gymnastics.

Next to Miranda, Will (13) and his mom, Katarina, sat in front of a laptop discussing an email message from his acting teacher. Will was a talkative, reflective teenager and his tall thin frame was blessed with the gift of graceful exuberance. His musical interest was the most advanced in the household, including his Dad who had

taught himself to play guitar and a little piano. Every day Will plays through his repertoire in the order he had learned them and then filled the house with his improvisations like 'ragtime on speed' or worked through songs he downloaded off of 8-notes, a website with free sheet music. For the last two years Will had also participated in plays with a local theater and was enjoying his latest class where the 'college type' seminar 'stretched' his abilities. When not involved in a production and not seated at the bench of the electronic piano, Will was intensely interested in 'philosophic astronomy' and loved talking about his theories of the universe, the wonder-full confusion of how computers work, and the latest theories about dark matter and black holes. Will also enjoyed most sports and was most likely to join Max for a round of tennis on the driveway or a sumo match with his sister Miranda. However, lately his graceful athleticism was utilized in rapier sword fighting with his older brother Jack. Will was thoughtful as he described some difficult times in his life, and insightful in his renderings of their impact as well as how he had overcome them. Constantly in the shadow of his older brother, he joked of his competitive spirit and talked openly about working through his nervousness while on stage. Will was a talkative, reflective teenager heavily engaged in certain areas of arts and sciences.

After the email was discussed with Miranda and Max had offered some advice, Jack (15) emerged from the 'blue room.' The blue room was a large room behind the fireplace that because of the ongoing remodel was filled with mattresses. It also contained a TV, gaming system with drums and guitars, an electric piano, and wire shelving with everything from completed Lego designs to games and books. Shower curtains on either end of the fireplace cut off the blue room from the main living area and

offered some relief from the light streaming in the windows. Jack sat on a stool at a counter that separated the tables from the kitchen and, with bowl of cereal in hand, asked Miranda about the paper.

Jack was the oldest with long, lighter hair and the beginnings of a teenage mustache. Adopted from an extended family member as a baby he had lighter skin than his siblings and carried himself with a serene self-confidence broken intermittently by teenage self-consciousness. His main interest for the last two years had been rapier fighting through the Society for Creative Anachronism (SCA) and he had pursued it with singular focus but branching permutations. Before the SCA Jack read, wrote and thought about knights, sword fighting and magic as his interest in fantasy led him to read voraciously. This interest had led him to develop a Live Action Role Playing (LARP) game with friends as well as joining and later starting a young writers club. Stories have been at the epicenter of many of Jack's interests and he linked them with rapier fighting, books, history, videogames, acting, movies, inventions, theory and strategy. With a rolling, changing voice Jack thought long before he spoke, but then became animated as he talked about stories and the worlds the authors have created. Comfortable in his own skin, his new athletic competitive spirit surprised his family because it only shined in rapier combat. Jack mused that because he can now sword fight and shoot a bow he is more like the main characters in the stories he has created since childhood. Despite his love of stories and reading, Jack still found the mechanics of reading and writing difficult and thus was a huge fan of audio books and had experimented with Dragon Speak. Keeping most of the stories 'in his head' he spent hours at a time talking through his

stories and developing his characters. Jack was a quiet, thoughtful teenager with interests in stories, history, inventions, and European martial arts.

After greeting everyone I stood for awhile, unsure of my role at this morning 'meeting,' when Will moved over and I was offered a seat at the table. For the next four hours, I sat enthralled by the conversations taking place at this table and honored that occasionally I was included. However in the first few weeks, usually sitting at this same table, I began to suspect that my presence was disrupting the normal activities I had come to observe. It wasn't until my second month that I became sure that the kitchen table was the normal epicenter of a day at home, and throughout my six months with this family the table served as a place to check my emerging understandings and delve further into the emic understandings of these autodidactics. It was not that they sat at the table for extended periods of time, but rather the table served as the main gathering place for conversations at once mundane and profound, practical and theoretical, emotional and cerebral. Occasionally these conversations were in response to questions I asked, but more often than not they were steered by four amazing autodidactics in the gestalt of living their lives.

Intrigued by the conversations at the table and how it flowed from practical scheduling to reflective analysis, I asked if these conversations took place very often. Will explained,

> my favorite example of a time when we were talking was when we were listening to Paul Simon in the car and everybody was asking about, you know, because he uses a lot of metaphors and stuff, and there was the boy in the bubble and the carriage. So there were all these different lines where we were like, 'what does this mean? What does this mean?' You know, we were asking about the song and then that turned into all these other things and 'how did this come about?' and this sort of thing. And so …(Will, interview, April 1, 2009).

Katarina remembered this exemplar as well and added, "you (Will) made the comment, 'wow we've been talking for 45 minutes' because one of them asked 'what does that mean? The boy in the bubble.' Max may have asked it" (interview, April 1, 2009). In this context, these autodidactics utilized the resources around them including their parents and siblings. They valued questions as a starting point, but did not limit themselves by trying to stay on topic. The conversations meandered and took unexpected turns as all the participants engaged in the discussions adding information, analysis and further questions in a very fluid context. While siblings were all actively engaged in these discussions, Katarina was also an important part of the context as she worked from home and thus was the primary adult with whom these young autodidactics interacted.

Will described how one particular conversation started and explained the importance of questions as well as his mom's role in their education.

> Like there was one morning where I woke up and I was like, 'Mom, why do oil prices go up?' Just randomly, and then that led to the stock market and that led to the housing market or something else. And so those discussions are usually just about whatever. And so those discussions allow you to learn without being forced, but also, I mean, if you think about it, somebody who's in school may not ask those kinds of questions or may not have that connection with their parents to just be able to say, 'what's this mean?' And so I think that's kind of cool, or a way that we learn differently. I just thought that was a good example. Being able to just ask a question and have it explained, or if they don't know, talk about it (interview, March 24, 2009).

Will's random question first directed at his mom became the stimulus that led to a wide ranging discussion of topics and concepts. He also explained how this is a different way of learning than his conception of more formal educational contexts. Discussion was seen as 'a way that we learn differently' or a different context whereby autodidactics attempt to get their questions answered and in which they pursue their interests, however

it also underlines the contextual importance of Katarina. While not a focus of this study on younger autodidactics, her contextual importance demands a more thorough exploration of her influence on the context in which these autodidactics operate.

Katarina was a middle-aged, self proclaimed over-achiever from a working class Latino family situated in a small border town. She talked quietly, but quickly became animated whenever the discussion broached subjects such as health, parenting or education. A Harvard educated pediatrician, Katarina chose to work at home while Bob, her college educated husband, was the full-time 'bread winner.' Katarina spoke often of her own traditional education and the choices she had made since the lofty societal goal of 'physician' was achieved. Intensely rational, Katarina balanced discussions between whispers to her children and forthright pronouncements about findings from neuroscience research and its implications. She logically formulated her discussions and pursued them with analytical vigor while still retaining the ability to listen peacefully and ask pertinent, analytical questions. She often referred to the non-profit she started which focused on education, parenting, health and psychiatry and was constantly reading and studying about her topics of interest. Boundless energy wedded to peaceful serenity, Katarina seemed to be equally comfortable multitasking as she was reading to one of her children with singular focus.

Most days when I arrived Katarina was in front of the laptop with tea in hand, the paper and cats spread across the table. As we talked, she helped with food, cared for cats, answered questions and worked on the laptop keeping up with countless newsgroups and list-serves as well as coordinating outings, organizing activities, discussing current events and living her life. Katarina's boundless energy was muted by the peace with which she

approached those around her and was reflected in her children. As we discussed her decision to homeschool she talked about the importance of choice.

> It's interesting because so often we don't see choice and so it's, 'I have to do it this way.' I'm talking about adults, you know, 'I have to work. I can't stay home with my baby.' Or 'I have to work. I need this house.' And not seeing the true cost of the decision or seeing that you can shift out of that paradigm and have a whole different, you know, these two don't have to be correlated. 'I was told it was this way.' 'Well, did you ever question it? Working, having two cars….' And it's different if you have that assumption at the very bottom of all your decisions: I do have a choice. If you start with that then you can paradigm shift. But if you don't have that, if you have absorbed the message that you don't have a choice, then it's just 'I just have to do this' (Katarina, interview, April 1, 2009).

Katarina and her husband, Bob, had made a conscious choice to forego a medical practice in order to be with her children while still pursuing her own interests through her non-profit work. She felt that many people do not see the choices they have, and the realization that she had choices and needed to think through them logically allowed her to shift from a person who just 'does it' to one who weighs options and makes conscious decisions.

She went on to explain how this paradigm shift led her and her husband to slow down, live more simply and to unschool their children.

> I think as a parent you want to be able to give them everything but what I found was that whenever I felt anxious about it, they just felt worse. And so I would work on okay this is… I would try to keep in mind that my role was to help minimize anxiety and frustration and just keep thinking and just try to feel comfortable with the uncertainty … which was certainly a stretch. It's like, you know, growing up with school and as an over achiever and 'here's what I have to do.' You know, you don't sleep; you don't eat; you just do. And then with child-rearing it's been trying to figure out how to slow down. And, you know, not think that there's boxes to check. And when I am able to not try to accomplish, it gets rewarded with really emotional connection and them figuring it out. And then, I think, if I had done that, they wouldn't have done it. They wouldn't have figured it out. And then the pride, and the boost that they got from figuring it out. You know, it's like, just giving them that space, especially as an over achiever. I think it would have been very easy to try to do everything for them. 'Oh, I know that. I

> know where we can find that.' And you know, so I've just tried to buy resources and show them when we get them and try to remember that they are there if they forget. But otherwise try not to do it. And not in a, you know, 'they should do it themselves' but modulating. Like, do you want some help with that? Do you want me to look that up for you? Or do you want to do it together? And let them tell me what they want my role to be (Katarina, interview, February 10, 2009).

Thus Katarina, a well-educated accomplished physician, helped collect resources, attempted to minimize frustration and anxiety, and created spaces designed to allow her children the freedom to pursue their interests. As an overachiever she could have done much of the work for them, but instead she allowed the children to define her role differently based on their expressed needs and attempted to suppress her own need for them to learn certain information.

She walked over to the table covered with stacks of books and started showing me some of the resources they have collected. Some were highly technical and appeared to be related to Katarina's own interests in parenting, education and related sciences. However, others were about writing, sword fighting, art, math, decorating, astronomy, and countless others as well as a stack of science magazines. The resources collected represent the ubiquitous knowledge available in the information age, while the time to explore and create is consciously chosen by this family and nurtured by an adult who honors 'childhood' interests and modulates help based on the expressed needs of these young autodidactics. The amount of information available was literally overflowing as Katarina pointed to boxes behind the 'art table' in which sat more books and supplies. Whether it was books collected from stores and libraries, DVD lecture series, documentaries from *Netflix* or *Youtube* offering video book reviews, knowledge all along the experiential continuum was ubiquitous. Additionally, the time and resources combine

with a high value on questioning to create spaces where discussions are an important method of learning. Together these contextual elements of ubiquitous knowledge, modulated support and space for discussion create the foundational context upon which these autodidactics construct and pursue their own curriculum.

While the narrative above is but a brief glimpse of the four autodidactics with whom I spent time, it offers a tenuous snapshot of the complexities surrounding these autodidactics' interests and the learning that takes place as they live their lives. These interests neither began nor were they pursued in a vacuum, and these contextual elements will aid our understanding of the themes explored in the following sections. While the themes of choice, goals and problem-situations interact in a multitude of ways, they are artificially separated here in order to aid the analysis of the constituent parts that make up the whole of interests, their pursuit and interaction with rationalized subject matter.

4.2 THEME ONE: CHOICE INTERACTS WITH COMMITMENT, CONNECTIONS AND CONFIDENCE

In the following narrative the subject meanings of choice are explored in the context of interests and their pursuit. When discussing education with these autodidactics my earliest research contained observational examples of the importance of choice as they talked about their day, interview data in which they stressed the importance of choice, and process tracings in which they talked explicitly about the choices they were making. It quickly became clear that choice was *the* essential component to their conception of an unschooling education. After a general discussion of how choice was discussed as the penultimate factor of autodidaxy, additional data about choice is organized by the elements with which choice was connected. It is argued through three

subthemes that more specific data about choice generally coalesced into notions of commitment to learning endeavors, flexibility in the connections made along the experiential continuum and confidence in one's ability to learn and organize the social world to enhance the pursuit of interests.

Thus, in order to fully understand choice as a theme of autodidactic education, I next present three elements of choice that are vital to understanding how choice operated for these autodidactics. First, through choice a deep commitment is garnered in which the subjects are intricately entwined with their pursuits through the choices they make as they pursue an interest. Second, choice allows autodidactics an inordinate amount of flexibility in making connections between disparate facets along the experiential continuum. Lastly, exercising choice develops the confidence these autodidactics express in their ability to procure knowledge that they deem important and organize their social world to enhance that procurement. Thus, choice is divided into commitment, connections and confidence as interviews, observations and process tracings resulted in choice being discussed and operating in conjunction with these elements. The substructure will be utilized to focus attention on these factors due to their prevalence as well as their possible utility in different curriculum iterations.

The following day is largely a puzzle of six months pieced together in an attempt to convey the experiential flow of these four subjects as they lived their lives. It is not that this particular day never took place, but simply that the words of the subjects have been garnered from months of research and thus are interspersed in an attempt to present relevant data within the contexts in which they arose.

Choice

As I pulled up to the house on a beautiful spring day, I saw Will and Max playing tennis in the driveway. They waved as I headed inside to find Miranda at the 'art table' drawing pictures of panda bears in their natural habitat. The house was quiet as Jack was still asleep in the blue room and I sat and watched Miranda work. She was looking at a book that used geometric shapes to help outline the animal. While none of the pictures were pandas she was still utilizing the book to help her get the shapes she wanted. I asked her if she ever took art lessons and she explained why she liked books more. "Because I don't think it would be fun to … well, it would be fun to learn how to draw something, but I would want to draw it my own way…. Because that's why I choose books instead of people because I can change it a little bit" (Miranda, interview, March 23, 2009). The control over what to draw and how to draw were so important to Miranda that she did not want instruction in art except from books where she was free to choose what techniques she wanted to use. The control was framed as a choice to pursue art through books rather than through more formal lessons with a teacher. Miranda not only utilized books, but would also observe the world around her to aid her renderings. She explicitly related how she observed trees from multiple perspectives when she was having trouble 'making them look right.' She observed people in her dance class for her silhouette piece she entered in an art contest and asked her mom to stand on her tiptoes so she could see the calf muscle from a certain perspective. The relevant point here is that choice to Miranda meant she had control over how to pursue her interest and this control was framed as a choice to pursue art in a self-directed educational format offered by

books, in spite of the fact that she was well aware of art lessons in which she could have participated.

At this point, Will and Max had finished their game, spilled into the entryway and headed into the kitchen looking for breakfast. I joined them at the table and asked Katarina about the role of choice in Miranda's art interest. She explained,

> choice and trust are connected. I mean you give your child choice if you trust that they can. And so that implicit message is very strong because in the reverse, you know, if somebody says they unschool except math and reading, invariably those kids will have no self esteem in math and reading…. It's not the instruction. It's the fact that in your instructing you're telling them that these are difficult unlearnable things and … you know, over and over studies where the teacher's belief about the child will impact, you know that expectation that they can learn and they do because we don't listen to the spoken word. We listen to the implicit message however it's delivered.… It's not cognitive at the experience level, at the emotional experience level (interview, February 10, 2009).

Allowing for choice in this context means trusting that the person is capable to pursue their interest in a way so as to facilitate their own learning. It doesn't always have to be solitary learning because many times these autodidactics chose to pursue interests through more formal instruction. However the choice to pursue an interest, the control over the method, is viewed by all of the subjects as integral to their learning. Will explained the importance of choice utilizing a counter example.

> We have choice over everything on what we do. Whereas someone who is forced to do math or reading or something for two or three hours a day, that may change their outlook on what else they want to learn. And if they're forced to learn math or reading and they are not enjoying it, then they may not choose to learn anything else or they may choose to learn something and still not be able to enjoy it. If their experience of learning itself, you know is… (Will, interview, April 1, 2009).

Choice is seen as the determining factor in whether learning is enjoyable, while the lack of choice changes one's outlook on that subject and may even transfer to other subjects.

Similar to Katarina's understanding of the experiential level of learning, Will views the choice to pursue an interest as inextricably linked to the 'experience of learning itself.' The interest and the pursuit of that interest are colored by the initial and subsequent choices the individual learner makes. Max fills us in on the tennis game he *chose* to play, laughs at his joke and asks his mom about an extra play class that's been scheduled for this week; play classes that each of these autodidactics have chosen to utilize for different reasons.

Choice And Commitment

As these autodidactics discussed their schedule for the week, choice was linked to the commitment these autodidactics felt to their endeavors. Gymnastics, rapier practice, dance, park day, trips to the library, and acting classes were added to the calander as Will told me about his choice to pursue acting through formal classes.

> I know it's so stressful, but I'm able to decide on what I want to do. And again it comes up to choice. If I was forced to do it I may not like it at all because I would feel like I'm forced to do something and that would make it even more stressful because I didn't have the option of quitting…. It would put me in a position where I wasn't enjoying the class. And I know this because I've been in classes with other people who really don't want to be there. And they're not very committed and they don't really want to learn their lines and they don't really care about their character and they're at a point where they're just kind of …. You know they're a person, another warm body to play this role, but they're not really committed to doing anything (interview, April 1, 2009).

Will again talked about the importance of having choice even when those choices led to stressful experiences. He also offered a counter example in which people without choice were not committed to the subject matter of the class, thereby acknowledging his own commitment to aspects such as character development and the memorization of lines.

Max agreed with Will about choice and commitment and told his own story of being in a play with people who were not committed. "Well, the cast was kind of, well I knew some of them, but they were never really serious, very serious about it. So, that one would've been, I would have liked it more if they had been more serious about it" (Max, interview, July 6, 2009). Thus for Will and Max there was a relationship between the choice in this context and whether people were seriously committed to the pursuit of an interest. Additionally, where their choice had led to a commitment, they enjoyed the pursuit of an interest more when others were also committed.

Finally Jack was awake and after he poured himself a bowl of cereal he took his normal position on the bar stool and listened to the conversation for awhile. During a pause he agreed that choice is the most important facet of their education and used a counter example to display the commitment he feels when involved in something he has chosen. "I think that if you didn't want to be in the class then you wouldn't really care so much about what you did while you were there. So in a sense you wouldn't have choice, so you wouldn't care … in a way" (Jack, interview, April 1, 2009). Jack links the choice to pursue an interest and caring about the subject matter. Thus, for these autodidactics in this context, choice is inextricably linked to commitment which is defined as a serious concern for the subject matter.

As Jack finished his cereal and Will wandered to the computer, Miranda pirouetted into the room and asked her Mom for a book that shows pandas because she had forgotten how their noses look. Katarina searched through a stack of books and handed one to Miranda who then danced her way back to the art desk. I followed and watched as Miranda looked from book to paper and drew ten or so noses. Finally finding

one she liked, she brushed the hair from her eyes, drew the face around it, and then proceeded to the body. As she continued to work on the panda, Will and Max started working through **FLASHPLAYER FOR DUMMIES**, a book on how to develop videogames. They showed me a few Flash games on the internet and then had me play a very simple game they had developed as part of the tutorial in the book. After working through a few more pages dedicated to probabilities and how to write programs with differential outcomes, they picked up plastic swords and began fighting in the fireplace room. Miranda soon joined them and showed Max a move she was taught at the last rapier practice, and Jack came over to offer advice on when to use the move. Laughing and playing they exchanged knowledge and sibling jests in the flow of a day at home.

In all of these activities, from computer programming to sword fighting, choice was central to why these autodidactics were committed to the endeavor. In copious fieldnotes I commented on the energy and vitality with which they approached their activities. During process tracings, these autodidactics constantly referred to choice and the interview data invariably linked choice with their commitment to pursue activities. However, they also had to explicitly tell me how certain activities were connected because I usually did not see a link between one activity and another, or between knowledge in one area and another. Thus, the next sub-theme of connections attempts to explain how choice linked disparate activities and knowledge together.

Choice And Connections Along The Experiential Continuum

My observational notes many times listed activities as a map of the day, but interviews and process tracings displayed connections between actions and knowledge

that I had assumed to be distinct. I flopped down on the couch next to Jack and listened as the conversation shifted to the imminent release of a long-awaited book. As the merits of the story were discussed Jack brought up a video review of the newest book that claimed the author followed Star Wars too closely and they hypothesize on whether he may alter the final book in order to dispel these critiques. At first I had thought this was just a complete shift in the conversation, but as they spoke about the book the swords never left their hands and it became clear that for these autodidactics the sword fighting and the book were connected. For Jack, his interest in stories led him to sword fighting and the SCA, but also led to an interest in history. "I guess the history interest has come from stories, because a history, I mean history is just learning stories" (Jack, interview, March 3, 2009). Thus, for Jack stories and history were experientially connected through characters and plot, swords and stories. While acknowledging that you can also learn from history, Jack relished the telling of 'true' stories which were 'just as exciting' as the fictional ones. With this connection in mind, Katarina helped explain how interests evolved and the way in which they connected what would seem to be disparate subjects.

> It just seems like they (interests) just kind of come and go. They keep coming back in a different permutation. Like Max and Miranda both have had all kinds of… well, how does the body work? How do babies grow? Or how does a baby learn this kind of thing? But I don't know. You guys have lots of different interests at different depths…. It's like you look at some of the questions that people have looked at and it's always very specific to them in their learning. You only get flow in that kind of situation where it is their question (Katarina, interview, February 10, 2009).

'Their question' highlights the choice these autodidactics have in this context. Katarina also stressed that interests had different avenues of pursuit, and yet the choice to pursue

them allowed for 'their question' to be the connective tissue which held disparate knowledge together.

Will shared some of his questions related to astronomy and philosophy, as well as some 'existential questions' he thought came from the many deaths in his extended family over the past year. Talking about these wonderings, he began to explain the connection they have to interests. "I think previously I might have thought, 'that's interesting' and then it starts a wondering. But at least now that I'm 13 or whatever there's all this background of things I've wondered about" (Will, interview, April 22, 2009). Will's questions allowed him to not only make connections with countless areas of knowledge, but he also realized that his background of wonderings offered him a wealth of future connections. When Jack linked stories to history and Will attached astronomy to deaths, or when Miranda related animal habitats with art and Max united videogame design with acting, the connections these autodidactics made were between their questions, their pursuit and the available knowledge in this context. What linked these disparate subjects in their mind were the wonderings that led them to pursue any related knowledge, and thus the choice to pursue 'their questions' inextricably linked whatever knowledge they came across with that experiential touchstone. Subsequently, they also talked about and displayed a confidence in their ability to learn new skills and knowledge in a variety of contexts as long as it was their choice.

Choice And Confidence

Attempting to map the activities in which these autodidactics participated and the subject matters with which they interacted, it became clear that many of their comments

about choice also seemed to relate to their ability to learn new information and skills. As Jack showed me the DVD history lectures I spotted a copy of *Rosetta Stone*, a computer program designed to teach a foreign language. When I asked about the program Will and Miranda told me of their pursuit to learn Spanish. It started almost four years ago with their first book but they did not like the format. The learning stopped for a year and then they found a different book that was slow to introduce new words and concentrated too much on a silly story. Will then relayed the events that led to their mom getting *Rosetta Stone*, which was the best of the three but still a little confusing. Intrigued by the pursuit of an interest that seemed to be unsuccessful, I asked about this interest and how they thought of it now.

> The interest may stop for awhile, but I don't think I'm…. I know later on I'm going to do something with Spanish. I don't think there's any chance of me not doing anything ever, the rest of my life involving Spanish. So that interest still stays. It's just this mode of learning… (Will, interview, April 22, 2009).

Will did not view these unsuccessful attempts as an end to the interest, but rather a problem with how that interest was being pursued. The previous books, as well as the computer program, were critiqued by Will and Miranda as they explained how the 'mode of learning' did not meet their needs. In this critical tale of their pursuit, it became clear that when a certain way of learning Spanish did not work, they chose to pursue other avenues in order to learn the foreign language. However, they never questioned their ability to learn it.

> Well I wouldn't feel like it was my fault just because I couldn't do it or feel bad about it, I'd just feel like I can't do it right now because of the circumstances. But I wouldn't blame myself for not being able to learn this on my own or anything" (Miranda, interview, July 6, 2009).

Miranda viewed the circumstances as responsible for the unsuccessful attempts and would not 'blame' herself. The choice to pursue an interest in a particular way also included the choice to stop. However the interest did not end for Miranda as she expressed that she can not do it 'right now,' and thus the interest remains to be pursued further at another time. Miranda then leaned over and asked Jack about the 'Queen's Hope,' an SCA event.

As the conversation shifted to this upcoming rapier tournament, Jack talked about his love of rapier fighting.

> Jack: A confidence kind of …. I really found in rapier … I was thinking about this actually. If there was any other sport I was interested in, that I could learn it.
> Tom: Even if it was completely unrelated? Not like going from rapier to fencing, but like rapier to soccer?
> Jack: Yeah. I think I could. Yes, from that I realize that I could, if I really focused and practiced, I could learn another sport.
> Tom: What about not another sport? Is there a transference to …chemistry?
> Jack: I don't think I've ever personally made that transfer, but I guess I could learn … chemistry if I wanted to. But I think, I've never thought that I could learn it fast necessarily. But I think if I really wanted to and I applied myself that I could eventually do it. I mean I think I could eventually get what I needed to. (Jack, interview, July 6, 2009).

Jack expressed a confidence in his ability to learn if he 'really wanted to' and applied himself. Thus, he links choice to a confidence that he can successfully learn something new. In fact, all of these autodidactics pronounced that if you choose to learn something, you will learn it … eventually. When unsuccessful attempts occurred it was framed as a continuing search for the right method of learning that would work for them.

At this point Will wandered off to play piano and Miranda to the computer, leaving Max and Jack talking about books. As Will's music reverberated throughout the

house and Miranda designed a building with Google Sketch-up, Max discussed a play he wanted to write and perform with his friends.

> I think it came from my acting and writing both together because I've never been able to do both of those together. I think that's most likely why I started trying to do this, but I just think it's really fun to write something like that and to know that other people will hopefully perform it. Or try to see if you could, like please a crowd or …. I'm not exactly sure why I would do it, but I just…. I like acting. I like writing. I like just playing with my friends, so… (Max, interview, July 6, 2009).

Max not only wanted to write a play, but he wanted to perform with his friends. Part of this arose from his dissatisfaction with the commitment people in his play class exhibited and some of it came from his desire to connect interests that he was pursuing, namely writing and acting. However, this also displayed a confidence in his own abilities to order his social world in order to enhance his own autodidactic endeavors.

As the sounds of Will's improvisation filling the house, Jack announced he was going to do his point control exercises in the back yard. I followed him out to find tiny targets posted on the shed wall. As Jack proceeded to close his eyes and 'throw shots,' I tried to understand the conversation he had with Max a little better. He emphasized that much of his expertise in stories was limited to the books he had read, but he also spoke of the young writer's club and books on plot lines. Comprised of home-schooled kids, the club used to meet at the library to read and talk about each other's work. However when the group became defunct Jack organized it at his house and found the group to be helpful in finding plot holes and other problems with his own writing. Finished with his exercises we headed back to the house and found everyone sitting at the table for lunch with the conversation in full swing.

The autodidactics in this study viewed choice as informing their sense of confidence in learning new skills and knowledge. The choice to pursue activities led to 'successful' acquisition of skills and knowledge which in turn led them to transfer this belief in their abilities to a multitude of additional areas of interest. Moreover, the confidence to organize their social world in order to enhance aspects of their endeavors was readily identifiable in their creation of new opportunities. This is not only choosing between available options, but systematically creating experiences with available resources in order to enhance their learning of knowledge and skills. Once again, this ability to organize their social world was linked in their minds to the overall choice they had over the process by which they would pursue their interests.

Analysis Of Choice

Keeping in mind the contextual elements of ubiquitous knowledge, modulated support and space for discussion, choice emerged as the penultimate factor of autodidaxy. Not only was choice seen as the defining attribute of their education but these autodidactics also linked choice to their commitment, the connections they made along the experiential continuum and the confidence in their ability to learn and organize their social world to enhance learning experiences. Before exploring these particular aspects of choice, it is important to briefly analyze these autodidactics' emic understandings of choice in general and how it functioned as the most important factor in their education. With a focus on the choice of interests and the pursuit of those interests, the following analysis utilizes Deweyen conceptions of relevant constructs in conjunction with findings from SDL and self-determination theory (SDT) (e.g. Ryan & Deci, 2000) to explore the

effect of choice on 'the experience of learning itself.' After this discussion of choice in general, the three sub-themes of commitment, connections and confidence will be analyzed. Analysis of how these autodidactics pursue interests and engage with rationalized subject matter will enlighten curriculum iterations in different contexts involving people with varied lived realities.

Spending a day with these autodidactics I was immediately struck by the amount of autonomy they have to choose what they will do at any given moment. Moving fluidly between tennis, art, sword fighting, videogame design, documentaries and books, they had control over what interests to pursue as well as the process by which they were pursued. Whether it was Miranda choosing to learn artistic techniques from books or Jack choosing to pursue history through DVD lectures, autonomous control over the process was important to these autodidactics. The event of choice was framed as autonomous control and discussed as moments of self-expression. In other words, the choice facilitated a self-referential moment in which the person became inextricably connected with what they chose to do. Additionally, this choice was not made once with control then being given to an outside 'expert.' Rather, autonomous choices were made continuously and reviewed during the pursuit of an interest. In every observation, process tracing and interview, choice was referenced as the bedrock upon which an autodidactic education rested, and thus the interaction between choice, learning and context will be analyzed in the section below.

Choice was important as *the* defining attribute of how these autodidactics framed discussions of their education and their world. In most interviews, these autodidactics referred to activities as "that's what I chose to do that day" (Jack, interview, March 24,

2009). There was not a conception of interest separate from choice. Even though there are not endless possibilities of interest, in this context of ubiquitous knowledge and modulated support, it is difficult to conceive of interests that could not have been possible. Additionally, to have an interest in this context is to choose it, and while the importance of this did not seem noteworthy at first, the constant attention to its operation by the autodidactics themselves signified a need to analyze it further.

The nature of choice described by these autodidactics is similar to autonomy as defined in the large body of work developed over the last thirty years by scholars working with self-determination theory (SDT) (Ryan & Deci, 2000). In this well-developed literature arising within positive psychology and informed by post-Kantian phenomenological and modern analytic philosophies, the important construct of autonomy is defined as "an internal perceived locus of causality" (Ryan & Deci, 2000, p. 70). Autonomy is operationalized as choice and empirically explored for its veracity in establishing "*functional significance*, or meaning of social events for people's goals and motives" (Ryan & Deci, 2006, p. 1572, italics in original). Defining autonomy as distinct from independence and assigning it a central role (along with relatedness and competence) as one of the basic needs of all people, SDT scholars have established findings relevant to the present discussion of autodidaxy.

As Jack's quote above reminds us, integral to these autodidactics' sense of education in their daily lives is the autonomy to choose their own interests. Autonomy here, as in the wider SDT literature, is defined as self-rule and separated from independence to the extent that one can be forced into independence or autonomously dependent. Thus the correlations found in the SDT literature between achievement

behaviors and a 'continuum of relative autonomy' inform this conception of autodidactics as operating with autonomy and subsequently displaying the correlated behaviors associated with academic achievement such as enjoyment and high degrees of effort (Ryan & Deci, 2000). Will's reference to choice mitigating enjoyment displays this same link and attests to the importance of choice for these autodidactics and how it operates to produce enjoyment and effort in this context.

Additionally, Miranda's thoughts about her control over the process by which she will learn artistic techniques shows that choice extends beyond that of interests, and autonomy is just as important in decisions surrounding the pursuit of those interests. Interacting with the context, the pursuit of an interest shows that choices are not made once and then forgotten. Indeed the contextual element of *spaces for discussion* allows these choices to become explicit. All of the subjects were observed in conversations with each other about possible resources through which to pursue their interests. Whether it was Miranda asking about fencing, Will asking about a word in a book, Max asking about videogame design or Jack asking about types of weapons, these interactions were usually quick but occasionally went on for hours and involved the entire family. Katarina's 'trust' and modulated support, along with these sibling interactions, shows that younger autodidactics, similar to older subjects from the SDL literature, are reliant upon others in the pursuit of their interests and autonomy is not the same as independence. In this way choice interacted with context to produce possibilities that were not endless, but rather choice operated continuously and was associated with enjoyment and high levels of effort.

The choice of interests and their pursuit was also linked to the 'the experience of learning itself.' For these autodidactics whether one had choice influenced the experience of learning and living. Through interests as acts of 'self-expression' choice became experienced as a facilitating event. The experience of learning was imbued with enjoyment and increased effort through the process of choice. As Miranda asked me, "why would you choose to do something you weren't enjoying" (Miranda, interview, July 6, 2009). The experience of learning was imbued with the character of choosing activities, and if you were enjoying the experience this infused the subject matter itself. As Will's counter example in the narrative displays, the absence of choice is experienced as heteronomy and this experience imbues the subject matter itself: enjoyable emotions associated with the experiential quality of autonomy; or negative emotions associated with heteronomy; control from within or control from without.

Choice was framed as control over interests and their pursuit, and choices throughout the pursuit of an interest were integral to the experience. Along with these global aspects, the particulars of choice as understood by these autodidactics can be viewed in three categories: commitment, connections and confidence. Using these aspects of choice to order the analysis will limit the view of their interrelationships, but will also aid our understanding of choice, its relationship to the interests which make up the self-constructed curriculum and the place of rationalized subject matter in their pursuit.

Analysis Of Choice And Commitment

The commitment of these autodidactics as they engaged in the pursuit of their interests could not be measured or quantified. As they enthusiastically pursued their own interests, stories were told about uncommitted people in plays, rapier fighting, dance class, and gymnastics lessons. In all of these stories, choice was believed to be the determining factor of whether someone was committed to the interest or not. During observations their commitment to these same endeavors was easily noticeable. Whether it was Jack practicing his point control exercises, Will practicing his piano, Miranda drawing the same feature countless times, or Max constantly tweaking the story line for a videogame, all of the subjects showed commitment to their interests through time and effort as they sought resources, organized groups, and practiced.

Recalling Dewey's definition of interest as an "impulse functioning with reference to an idea of self-expression" (1967, p. 133), we would expect people to be committed to an interest they choose. In fact, the interest of rapier fighting, speaking Spanish, scientific theories and art is 'between' the person and the materials and results of their actions. In other words, by choosing these endeavors the autodidactics are involved in an act of self-expression. By contrast, those 'who did not want to be there' were viewed as uncaring, or 'not serious.' Thus Dewey's definition of an interest as 'objective in the sense of concerns' means that an interest inherently includes a concern for the endeavor. Without choice it would be difficult to affect serious concern for the subject matter. Every one of these autodidactics' self-defined interests was taken seriously, even though they all acknowledged that there were parts of the pursuit that were more enjoyable than others. "I don't think any of us mind doing work if we choose

to do it" (Jack, interview, April 22, 2009). Thus, feeling nervous about a play or tournament, memorizing lines, scouring for books, searching for videos, or dealing with the group dynamics in a book club does not diminish their commitment to the interest specifically because they chose it. This process by which choice is linked to commitment was hinted at in the general analysis whereby greater autonomy is correlated with greater effort in the pursuit of interests. This finding within SDT is conceptualized here utilizing Dewey's notions of interests.

Something "has interest when it presents itself as an instrument of carrying into effect some dawning energy or desire" (Dewey, 1967, p. 124). To 'carry into effect' means that these autodidactics were seeking to become sword fighters, historians, decorators, scientists, videogame designers, and a whole host of other dawning energies. This is not to claim that the dawning desires are complete, but rather that they are operating with an effect in mind. Additionally, as I listened to these autodidactics talk about their interests, there was 'an internalization of worth.' Drawing, writing, acting, composing, designing were all viewed as worthy of their time and effort. "But see that's the thing. I'm already doing piano every single day and that may be considered tedious and boring but it's not to *me*" (Will, interview, April 1, 2009). Will chooses to play piano and thus is concerned with it because of his own internalization of worth. These autodidactics choose to pursue interests and this leads to a commitment which is defined here as a concern for its pursuit and the internalization of that which brings about its expression, operationalized in the SDT literature as effort and/or persistence. Obviously the idea of self-expression begins to broach Dewey's notions surrounding means, ends and goals. However for now the importance of choice in the determination of

commitment is highlighted as an important emic feature. The autodidactics themselves not only displayed outward signs of commitment including daily 'lessons,' 'tedious' practice, and emotional difficulties, but also specifically talked about the connections between choice and commitment. There were also examples of when they chose to stop a particular avenue of an interest, and this implicates the next aspect of choice: connection.

Analysis Of Choice And Connections

In talking to these autodidactics it became clear that interests for them never ended; they just evolved or were put on hold. Additionally, interests were separated from wonderings which were more finite and they couldn't remember many because "you just wonder and then you find out and then you know" (Miranda, interview, March 23, 2009). At the beginning of my research I asked about interests that were completed, and my misconceptions became clear when they could not think of one. Instead they described how their interests evolved and changed or were forgotten for awhile and then reappeared or changed form. The connections they made amazed and intrigued me, and I began to take special notice whenever they mentioned connections that were logical to them but escaped my understanding. As a history teacher I always tried to get my students to understand that history was a story, but telling students there is a connection is very different from an autodidactic choosing to look at the stories from history.

Katarina first tried to help me understand these connections talking about 'different permutations' of interests, but I did not begin to understand until I heard the subjects themselves talk about the connections between weapons and politics, videogames and acting, playing with doll houses and art, or acting and performing in

tournaments. The connections come about because the subjects are making the choices that lead them from one path to another and they do not see this change in direction as a change in the interest.

> One of the other things is I guess I've always felt that I have it, like I never have thought that I didn't have a passion (interest). So, like I've loved fantasy ever since I was five. And before that I liked knights and dragons and dinosaurs, so I've always had interests. They've always kind of been an overall, I mean kind of like they all kind of fit. So, they've always been there, but they've kind of branched. There's been many outlets I guess for that (Jack, interview, July 6, 2009).

They all fit because Jack chose to pursue 'dragons and dinosaurs,' fantasy and history, weapons and politics. This is not simply connecting things in some chronological fashion. They are not connected because one follows the other, but rather they are experientially connected through choice.

Dewey's 'how to do' knowledge connects their questions and pursuits into a tight bundle called an interest. The choice to pursue knowledge about weapons led Jack to the SCA as well as to history lectures on DVD. The choice to pursue knowledge about art led Miranda to decorating shows and books on the habitats of animals. Thus, these connections are linked by the choices these autodidactics make in their pursuit from 'how to do' knowledge that leads to communicated knowledge and in some cases to rationalized subject matter. This also helps delineate the finding from the SDL literature that learning episodes contain unpredictable pursuits and outcomes. However, even though they are unpredictable, they are not disconnected in the mind of the autodidactic, but rather connections are made all along the 'experiential continuum.'

There remains a taut connection between the experiential knowledge of 'how to do' that many times initiates interests, what Katarina refers to as 'their questions', and the

subject matter which many times is accessed during their pursuit. Now Will's quote about his 'background of things I've wondered about' becomes even more enlightening. These wonderings are the 'how to do' knowledge basis for these connections. In whatever context they arise, these wonderings allow for connections to be made between these autodidactics' questions and the 'combined knowledge of the human race.' Thus, the connection between human purpose and rationalized subject matter they happen to engage with is reestablished as they pursue their interests. It would appear that these people in this context are psychologizing their own self-constructed curriculum and choice is the fulcrum of connection.

Analysis Of Choice And Confidence

Each of these autodidactics expressed a supreme confidence that they could learn when it was their choice. They believed that if someone were choosing to learn the material, they would learn more efficiently and remember more of the subject matter than others who did not have a choice. Interestingly this same belief has been verified by the SDT literature in multiple settings and formats (e.g. Boggiano & Katz, 1991; e.g. Ryan & Deci, 2006), but never in a context with this degree of autonomy. Additionally, any problems experienced during the pursuit of an interest were always framed as a problem with the 'mode of learning.' Thus, Will and Miranda never felt bad about their foreign language acquisition skills, but rather framed it as a problem with the pursuit of that interest. Choice of how one pursued an interest insulated these autodidactics from negative self-images attached to subject matter. It also appears from Jack's comments about transference that success in some areas informed their overall self-image as

successful autodidactics. Thus, choice allowed positive outcomes to bolster their confidence while simultaneously shielding them from the negative effects of unsuccessful attempts. The interest never goes away, they simply need to find and choose a better method of pursuit. Thus, the interest is disciplined rather than the person.

Dewey went to great lengths to explain the benefits of 'standpoint, outlook, method.' The subject matter was meant to discipline the interest and how it was framed, rather than conceptualizing discipline as something that happens to an individual. In order for an interest to be disciplined 'the agreed upon process, outlook and assumptions' need to be utilized by the individual. For these autodidactics if the pursuit was unsuccessful, the interest was not disciplined but neither was the person. If the pursuit were successful, it became an example that all other interests could be disciplined given that the proper mode was utilized. This is not to say that the interests were disciplined exactly as they are by experts in certain fields. However, given the interests pursued by these autodidactics, they came into contact with rationalized subject matter and their 'warranted assertions.' Whether in gymnastics, math, art, rapier tournaments, theater, science, piano or writing, these autodidactics came into contact with externally defined parameters of success. In other words, the interest was subjected to 'socially proscribed' methods of pursuit and judgment. The choices made by these autodidactics readily led them to these social proscriptions, and as long as they chose the pursuit of the interest, they were willing to do the 'hard work.' Additionally, many times these autodidactics pursued interests in groups, such as acting and the SCA, in which the parameters of pursuit were 'imbued with social significance.' Similar to SDT's 'functional significance,' this two-fold social nature of the disciplines was found in many of the

pursuits observed and was similar to operations described in studies of legitimate peripheral participation (Lave & Wenger, 1991).

These groups were not always readily available and the autodidactics' response is the final aspect of confidence to be explored in this section: the choice to organize. On occasion, these autodidactics organized groups in their pursuit of an interest. Jack joined and then organized his own 'young writers club' for the specific purpose of exploring the discipline of writing, and Max was planning a similar group to explore writing and acting. Here choice operates within a context of 'functional significance' as these autodidactics create their own opportunities to work with others towards ends imbued with social significance.

Choice for these autodidactics was the penultimate emic feature of autodidaxy and associated with: 1) their commitment to the endeavor; 2) connections made along the experiential continuum; as well as 3) the confidence they perceived in their ability to learn and to organize their social environment for further learning. Dewey's notions surrounding means and ends as well as SDL's conceptualization of problem situations have been shadowing the present discussion of choice. Interwoven in the daily lives of these autodidactics, choice, goals and problem situations are difficult to separate. However, in order to better understand how they operate in this richly contextual environment, goals and problem situations will be presented as analytically distinct from choice so as to focus attention on those elements that can be utilized to inform curriculum construction and the place of rationalized subject matter in different contexts.

4.3 THEME TWO: THE GOALS OF AN INTEREST

It is clear from the data that choice was integral to these subjects' conception of autodidaxy in determining interests as well as how to pursue those interests. Additionally, the experience of learning itself was colored by the presence of autonomous choice and specifically discussed in terms of commitment, connections along the experiential continuum, and the confidence to learn and organize their social world for further learning. However, the inception of interests, the process by which interests were pursued and the place of rationalized subject matter appear as skeletons when solely focused on the importance of choice.

The second theme of goals discussed in this chapter arose from observations and discussions with these autodidactics about their self-constructed curriculum. The observations of interest pursuit and related goals were as prevalent in the data as those connecting interests, process and choice. These became even more explicit in observations of outside activities and debriefings after process tracings. It became clear that goals are integral to understanding the interests autodidactics choose (i.e. the self-constructed curriculum) because they conceive of interests in terms of the goals inherent to their pursuit. Goals also define the challenges sought by these autodidactics which add meaning to their pursuit, import to their fulfillment and enjoyment to the experiences associated with the interest. Additionally, the wealth of data about goals further coalesced into sub-themes which display the dynamic character of goals as they mediate interests, evolve, and are negotiated.

Thus, goals will first be analyzed for its general properties and importance in autodidactic endeavors as inherent to the pursuit of interests, as well as the challenge

goals make possible. After this general discussion, the sub-themes will be explored because they frame the pursuit of interests and have the potential to lead to deep interaction with rationalized subject matter. First, an exploration of the processes by which goals mediate interests yields important understandings of how goals operate within these autodidactic contexts to suffuse means with the ends-in-view. Second, the evolution of goals is investigated as they change from ill-defined semiconscious constructions to include those identified with rationalized subject matter. The final section considers how autodidactics negotiate the means and ends identified by rationalized subject matter. Once again, it is hoped that through a deeper understanding of the place of goals in autodidactic endeavors, as well as the process by which goals mediate interests, evolve through goal integration, and implicate moments of negotiation will allow for the utilization of interests and goal facilitation in varied contexts with different curriculum iterations.

In the following narrative, relevant data will once again be interspersed within a composite of observation and conversation. The subject meanings attached to interests in relation to goals will be sketched in general terms followed by specific notions and processes of mediation, evolution and negotiation. Consequently the narrative will be divided into four parts, the general notion of goals in addition to the three sub-themes, so as to call attention to the general theme of goals in relation to interests, as well as the sub-themes in which certain aspects of goals are delineated into mediated interest, the evolution of goals through integration, as well as the negotiation of goals from rationalized subject matter.

Goals

It was odd seeing the subjects outside of their home environment, but after two months at the kitchen table I went to visit one of the outside activities I had heard so much about. Miranda and Max had just started new gymnastics classes when I had begun my research, and I had heard numerous conversations about the differences between the present class and the previous 'homeschooler' class. It was Friday night and I arrived at the corrugated steel, barn-like gym just in time to see Miranda's class start their warm-up and conditioning. She had explained to me earlier that one of the reasons she liked this class better was that they did 'hard-core' conditioning for the first forty-five minutes. As I got used to the smell of feet that always accompanies an establishment designed for barefoot sport, I watched Miranda through the numerous windows that separated the workout area from the sitting room. The conditioning was grueling and after a few minutes all five participants were red-faced and sweating profusely. Amazed at the contortions the coach was demanding, I wondered how Miranda would make it through the two hour class.

Looking out the windows on the opposite side of the sitting area, I spotted Max on the rings and noticed there were only two other kids in his class. The coach was spotting Max as he worked on his dismounts while the other two participants did floor exercises. Max and Miranda had both expressed dissatisfaction with their previous classes which they said were more like babysitting than coaching. Miranda compared the two classes.

> Before it was like, I'd ask somebody to teach me something, and they would teach me and then they'd just walk away. But (now), it's like they teach me something and then think I'm ready for something else, and it's like they want me to keep going. I think it's more fun because before I had to see someone do something and I didn't even know what it was called and I'd have to ask them, 'can you

> teach me whatever?' And then they'd teach me it and I wouldn't really progress very much (interview, March 23, 2009).

For Miranda, to be interested in gymnastics was to progress and she was not satisfied with a class that did not help her achieve her goal of progress. Additionally, she and Max both relished the conditioning aspect of their new classes because they saw it as helping them progress in gymnastics. In fact, Miranda explicitly said that the new class is fun because she is being shown what it means to progress. Max also spoke of his goal to progress and delineated what 'progress' meant for him.

> Well, before I used to take this like not very serious homeschooler class ... and I decided to try out this new class. And I really liked it because what I was really bad at in the first one, was just like I was really getting to practice and get better at it. I mean I can tell, even though it's only been like a month or two, that I'm a lot better at it (interview, April 1, 2009).

For both Max and Miranda, the goal to progress was integral to the interest and was defined as working on those aspects in which they were not previously successful or learning new aspects of their interest. They had chosen the interest of gymnastics and this automatically led to conceptions of progress, especially in those areas in which they struggled. Thus for these autodidactics, they were not satisfied with being able to 'just mess around' with gymnastics equipment, but instead set the indeterminate goal of wanting to progress and actively sought out classes that would provide the instruction and practice they felt were necessary.

After the forty-five minutes of conditioning, Miranda and Max came out for a water break with beaming red faces. They reveled in their exertions, and seemed to take pride in the difficulty of the conditioning. As they ran back to their respective classes, I was joined by Will, Jack and Katarina who had been at the bookstore looking for new

books. I commented on how much their siblings seemed to enjoy their classes and all agreed that they were a huge improvement compared to the previous class. Since Jack and Will had participated in the discussions that led to the change in classes, I was interested in their conceptions of the two classes. Will talked about the challenges he sought out in acting, and then Jack started talking about goals in general.

> A goal is something kind of challenging because otherwise it's…. If you can do it really easily then what's the point of really trying? It seems to me a goal is when you work really hard. You have to work at it to get something accomplished (interview, April 22, 2009).

For Jack, as well as his siblings, interests included goals and goals had to be challenging. Will adds, "I think of it (interests) in terms of, you know, 'I want to keep doing this. It's fun, and I can keep getting better'" (interview, April 1, 2009). Thus interests usually included progress of some sort, but goals were not always easily defined. Additionally, goals were rarely designed by the autodidactic in isolation, however ideas of progression and challenging goals were fundamental to their notions of interests.

At home that evening I looked at the data I had collected up to that point and noticed that discussions of interests invariably led to goals associated with some idea of progress. Whether it was piano, acting, art, math, sword fighting, writing, history or inventing, all of the interests discussed by these autodidactics led to considerations of goals and progress. With these thoughts in mind, I arrived early the next day excited to conduct my piano process tracing with Will.

As I walked in the house, I was surprised to find Jack and Will already awake and finishing their breakfast. The table conversation was winding down, and Miranda and Max were already 'back in the woods somewhere.' I asked if Will was ready for his

'scheduled piano practice' and we headed into the blue room where the electric piano sat against the back wall. I pulled a chair up next to Will and explained the talk-aloud concept again. Talkative as always, Will had no trouble speaking his thoughts as he went through his 'normal piano routine.' After he played his songs in the order in which he learned them, he moved to the computer to find new songs to add to his repertoire. After looking on *Eight Notes*, a website with free sheet music, Will told me that he was still working on a piece that he referred to as the 'pinnacle of my dreams.' He explained that it was a highly technical piece that was really hard and sounds really cool. He moved on to *Google* a composer he knew from a movie score he liked, but after ten minutes of lots of information without any sheet music he moved back to the piano and explained his latest improvisational algorithms, "I take the chords and split them up and then play them super fast in different progressions which is always a challenge" (Will, process tracing, March 24, 2009). He explained that he liked doing this because it was difficult and 'always a challenge.' After thirty minutes of 'ragtime on speed,' we were both ready for a break and he went out to track down his siblings in the woods. Thus for Will, pursuing his interest in the piano invariably led to learning 'really hard pieces' and playing improvisations that were challenging and helped him progress in his abilities to play more difficult pieces.

For these autodidactics their interests were intimately tied to conceptions of progress and, as the interest was pursued, they actively sought out challenges. To choose an interest appeared to be integrally linked to pursuit that was partially defined by challenging goals that they could work towards. Additionally, they linked the difficulty

of the challenge to enjoyment and the desire to keep pursuing the interest with 'getting better at it.'

Goals And Mediated Interest

As lunch approached, Miranda came into the house and headed straight for the art table. I wandered over and watched as she began to draw a stand of trees. With Will's process tracing fresh in mind, I peppered her with questions about this latest project and she patiently told me of her efforts to draw trees. Initially happy with 'cartoon-like' trees, she told me that she had progressed to attempting more realistic depictions (observational notes, March 3, 2009). I asked about how she was pursuing this project as I had not seen any books on techniques for drawing landscapes. She told me that one reason she had gone into the woods was to look at the trees, and that now she was attempting 'to get them to look right.' Thus, observations combined with trial and error were utilized in Miranda's attempt to progress in her drawing skills.

She showed me a stack of her previous attempts, smiled sheepishly and told me that a lot of times she got frustrated and needed a break. However, she also flipped through the stack and showed me examples of her early work, and talked about how the trees were getting better. Self-consciously brushing the hair from her eyes she focused back on the paper engaged in trying to shade the bark and give enough shape to the leaves. After five minutes she paused, so I asked her if she enjoyed the process of observation, trial and error and she revealed that she didn't always enjoy practicing. Lifting the stack of trials, she shrugged and said, "I don't always like doing it, and I used to get really frustrated when I was younger that I couldn't draw it exactly…. But now I

realize that you have to work at it" (observational notes, March 3, 2009). For Miranda, the challenge of progressing was not always enjoyable, but it was deemed necessary if she wanted to continue to improve. She was obviously proud of the progress she had made in her attempts to draw realistic trees, and thus was willing to 'work at it.' After another three attempts she declared a break and joined her brothers at the kitchen table for lunch. After lunch I noted that Miranda spent an additional hour working on these drawings and added them all to the stack of half-drawn, rejected trees.

After lunch, I heard Will talking to himself in the blue room and wandered over to see what he was doing. He laughed when I walked in on his monologue and explained that he was practicing lines for his acting workshop. He had two incredibly long monologues and I asked him how he memorized that amount of information. He acknowledged that it was very difficult because you did not have anyone to play off, but he was using the same techniques he had used for all the previous performances which consisted of walking around with the script and trying to say it while peeking when he got stuck. He said that he tried to practice his lines every day, but on certain days he really did not feel like it.

> There was a few days where I would feel kind of bored and I didn't want to do anything and then I would start thinking about something and then I would start thinking about the performance. And not like, 'oh, it's coming up,' but about, 'oh, we just did the play' like kind of imagining what would happen, and then I'd be like, 'oh I better go practice my lines.' Whereas before I'd been kind of like, 'oh, I don't want to do anything today. I don't want to have to practice my lines. I don't want to have to do this, that and the other.' And then I'll be able to motivate myself (Will, interview, March 24, 2009).

Imagining what would happen during the performance motivated Will in a positive way to practice his lines. He went out of his way to explain that it was not a feeling of dread

that the performance was 'coming up,' but rather he utilized his imagination of how the play could be to motivate himself. While acknowledging that all aspects of his interest in acting were not enjoyable, he realized that he had to 'work at it' and even became excited about doing so because of the imagined performance.

Our discussion attracted Max and he said he does the same thing in gymnastics. He would imagine the tricks he wanted to be able to perform and it motivated him through the grueling conditioning part of his classes. However he then went on to discuss the close connection that needed to be maintained for optimal motivation. He explained his problem with one of the coaches,

> yeah it's kind of hard. The teacher, another thing about him was sometimes he'd just sort of teach us the same things over and over again. And it's sort of more of a conditioning class with him. Remember when we were on rings? Well only one of the little stations was something that was actually a trick. The rest were just conditioning and then there's a lot of that stuff that we do. I mean it's hard, but it's not fun to just do conditioning (Max, July 6, 2009).

Once again for Max, progression was integral to the interest and he became critical of conditioning that he did not perceive as leading to his goals. The connection between what he had 'to work at' and the goal of progression was not tight enough. He also referred to the difficulty of the class as a positive, but he wanted this challenge to lead to his notion of progress. I then asked him to describe his idea of the optimal organization of a gymnastics class.

> Like letting you do what you want to do, but instead of just letting you play around … they would help me progress. Not do whatever I wanted to do or make me just do conditioning the whole time. That's the two different sides of it and in the middle is probably the best (Max, interview, July 6, 2009).

In other words, Max did not want to 'play around' in gymnastics because he wanted to progress. While acknowledging the importance of conditioning, he also did not want to

condition solely for its own sake, but instead relished the difficulty of the conditioning as long as he could see the connection to his goals. The 'two different sides' represented the two aspects of gymnastics for Max: his goal to learn new tricks on one side and the 'hard work' it would take to achieve his goals on the other.

Thus for these autodidactics engaged in their various pursuits it is clear that challenging goals of progress were integrally linked with their interests. Additionally, goals offered them reasons to vigorously proceed with the more onerous tasks associated with their pursuits. Whether it was drawing trees countless times, memorizing lines or participating in grueling conditioning exercises, as long as these difficult aspects of their pursuit were tightly connected to the goals in the autodidactics' minds, they were more than willing to 'work at it;' they even seemed to revel in it.

Goal Evolution Through Integration

As the clock approached two in the afternoon the house suddenly became a whirlwind of preparation. Swords, helmets, gorgets (a leather neck protector), bags, water bottles, snacks, and coolers were thrown into the van as Katarina gave me directions to the park where rapier practice was held. Everyone was going to acting classes first and I was to meet them at the tennis courts where the SCA held rapier and heavy fighting practice every Thursday and Sunday. Having watched videos of tournament fights with Jack and Will I thought I knew what to expect. However, walking up to the tennis courts where the fighting took place I quickly learned that I was unprepared for the cavalcade of people and noise that assaulted my senses.

While the onlookers wore shorts and T-shirts, all of the heavy fighters were dressed in full-metal period armor which seemed to ring throughout the city when any wooden sword made contact. On the other side of the net, the rapier fighters were simply dressed in fencing helmets, gorgets, pants and long-sleeve shirts thick enough to stop the blunted metal swords. Jack and Will were already stretching in anticipation of their practice and I sat on the ground next to Katarina and Bob. For the next two hours I sat enthralled by the spectacle of a truly historical martial arts contest. The main activity seemed to be one-on-one combat with the winner staying to fight the next round. Intermittent instruction was given by the marshals as they kept the fighting 'civilized' and occasionally allowed the participants to rest on a hot, balmy evening. After an hour of individual competition, the six youth participants were separated into two groups and began to fight melees. Jack and Will had told me earlier that they enjoyed the melees more than any other aspect of sword fighting because of the combination of strategy and skill. However, they also both noted that they did not start this interest with an appreciation for the nuances they now enjoyed so much in the melee competitions.

> When I first started rapier fighting I didn't really have a goal. I mean, I would go there and I would fight and practice and then my goal was just to not, well maybe that's even a goal, my goal was just to not screw up. Because, I mean, there were things I was still having to, you know, make sure my foot was pointed and my arm was in the right place. My body was standing right, so that was my only goal then. So I didn't really have a goal for the overall rapier fighting, I just liked doing it. And I guess I was improving and I had a goal to improve, but not really … I hadn't thought, 'oh I want to get really good at this.' It was just kind of happening (Jack, interview, April 22, 2009).

When Jack first became interested in rapier fighting, he had an almost unconscious, ill-defined goal to improve and was simply focused on the basic mechanics of the sport. However as he became more experienced with the basic skills and learned about the

historical basis of the SCA and the specific time period, the goals of rapier fighting changed.

> First I attempted to get authorized…. So I did some exercises on my arm and then once that was passed then I kind of had well, you know, I want to do well in the tournament. So I practiced harder for the tournament and that's when I really started to really like rapier. There was kind of a goal I had, you know, I had a goal and before that I hadn't really had a goal as much. And I still liked it, but …. To me it gives me something to work towards and to practice for. And I guess with tournaments I started to learn more about, you know, in preparing for that tournament, learning more about tournaments I also learned more about the SCA, its structure, you know, the Dons and the Cadets. And so that gave me more goals, you know, to be one of those one day, like in the more distant future I guess. But, so and then having a goal made me pursue it a little more and then from that obviously I enjoyed improving my skill, but having a tournament, having tournaments to do it for was a little bit more fun; to have to practice for something rather than just to practice. It just, there was something to do rather than just getting better. And now I want to study rapier fighting, like historical and strategy and how they really used different weapons (Jack, interview, April 22, 2009).

As well as attesting to the power of goals and mediated interest, Jack's goals became more defined as he became immersed in knowledge and goals surrounding this interest. From the SCA's structure to the historical research Jack conducted (Observation notes, April 1, 2009), the goals became more attuned to the nuances of the interest in specific ways. It is also important to note that as he became more immersed in this interest the goals reverberated into 'the more distant future,' as well as including the goal to 'study' the history of rapier combat and strategy.

After a late night at rapier practice, I arrived in the afternoon the next day to find Miranda in the front yard practicing gymnastics. She was attempting to do a round-off back handspring, and I asked her where that goal came from. She laughed nervously and looked at me like I had a third ear growing out of my forehead, so I asked her if that trick was her goal or if it came from the instructor. "Well, I mean, I have goals. I want to

learn this or that, but I guess they want us to learn new stuff too. So I guess both" (Miranda, interview, July 6, 2009). Even though Miranda had never conceived of this trick before taking the class, she viewed what they were teaching as being copasetic with her own goals. Thus, as they taught her gymnastics her goal changed from an ill-defined progression to one that included specific knowledge and skills of the interest itself. Miranda knew she was 'getting better,' but now she was immersed in the interest enough to know specifically where she wanted to exert her energy and she trusted the instructor to help her achieve this goal.

For these autodidactics a deeper understanding of the knowledge and skills surrounding an interest resulted in a refinement, or evolution, of their own goals that in many ways matched the goals of the wider community of practitioners. From ill-defined even unconscious progression, they attuned their own goals to match the acknowledged skills and goals surrounding the interest. However, goals surrounding an interest are not always accepted as there appear to be moments of negotiation as well as integration.

Goal Negotiation

As I entered the house I found Will at the piano playing his usual practice routine. Still thinking of the apparent evolution of goals in rapier fighting and gymnastics, I interrupted him with questions about how his interest in the piano developed.

> Towards the beginning when I started learning piano I wanted to learn new things because I only…. I had learned everything my Dad had taught me in like two days because he had just picked out some things from piano because he played guitar. And so since I knew those simple songs or whatever, I wanted to learn more things (Will, interview, May 1, 2009).

Similar to Jack's experience with rapier fighting and Miranda's with gymnastics, the beginning of Will's interest was connected with the ill-defined goal to 'learn more things.' He was not aware of the knowledge and specific skills surrounding this interest until his unfortunate meeting with a piano teacher ill-matched with Will's autodidaxy. At the first meeting Will suspected a mismatch when the teacher demanded that Will learn to sight read because "if you can't sight read then you can't win any music contests' (Observational Note, May 1, 2009). Unfamiliar with this goal, Will at first tried to comply. However as he became more familiar with the attendant knowledge and skills of piano that encompassed more than music competitions, and noted his negative feelings toward the piano grow, he stopped taking lessons from this teacher and decided to learn on his own (Observational Note, May 1, 2009).

Will later explained his rational for stopping the lessons and choosing not to spend time learning to sight read.

> I don't know if I want to be a concert pianist and play in an orchestra. That may be kind of cool, but then again that's not what I need, or not something that seems immediately interesting to me. But I know that I'm going to continue playing piano…. It's something I like, but that doesn't necessarily mean that it's a career. It just means that I'm going to keep doing it. But … because if I had learned how to read sheet music, sure I could play in a band or in a jazz group or for, let's say, like Miranda's rock musical had someone playing the piano for it. So I could play in all those things and do that, but it's not necessarily something that I want to do. I just like playing the piano. I don't need to sit down and read sheet music for money. I don't need to learn how to sight read just so I can be a concert pianist or play in a concert or something. So, piano is definitely something I want to keep doing, but it doesn't lead directly to …. But it's funny because recently I've been trying to figure out if I were to keep playing piano, you know, I might be in a rock band playing the keyboard or the organ or whatever in the background (Will, Interview, July 6, 2009).

While Will is influenced by his broader knowledge of piano as an interest and its attendant goals, it is important to note that he negotiated the goals by relating them to

possible future pursuits of this interest. While he ultimately rejected the socially proscribed goal of sight reading, other goals such as melody, improvisation, tempo, and chord arrangement were integrated into his interest pursuit. Thus, Will's experience shows the same underlying mechanism of future-oriented projection, but with a negotiated result.

At lunch, Will and Max discussed their latest *Flash Player* creation and told me of the next chapter in the instructional book they were using. I asked if I could watch as they worked through the tutorial in this chapter, and after they finished their lunch we headed over to the computer. As Will read out-loud, Max handled the mouse and looked from the book to the screen attempting to understand a program designed to model the role of a six-sided die. As they worked through the mathematical concepts of elementary statistics, I broached the subject of math. Earlier in my research Katarina had told me that Miranda, Max and Will had interests in math, but until now I had not observed any pursuit of this subject. Will told me of learning long division when he became interested in how a simple algorithm could "do what a calculator does" (Will, Interview, March 24, 2009), and both he and Max took a standardized math test for "fun." However the tutorial offered a chance to observe first hand how they interacted with math as a rationalized subject matter in the context of the challenging, goal-oriented interest of videogame design.

In the tutorial the basic math concepts were covered before the actual coding needed by *Flash Player* to initiate the program, and thus for the first twenty minutes both autodidactics struggled to comprehend the basic constructs of probability. As Will explained probability as a ratio, Max wondered if the denominator would ever change.

"It can't change because it's the possible number of outcomes" (Will, Observation Notes, March 3, 2009). Max then talked about the difference between theoretical and experimental probability, but Will reminded him that only part of this information was needed to understand how to write the code. They both agreed and moved on to the tutorial which walked them through the steps in creating buttons that when pushed would send the player to one of six different scenarios. After completing the code, they started to think of different ways the code could be used in games they wanted to create.

While the book contained mathematical concepts that were not needed to understand and write the code (e.g. experimental probability), in this particular situation the autodidactics decided to ignore these parts and moved on to information that was in line with their own goals for videogame design. It is important to note that while all of the goals in the book were not integrated, the information they believed impacted their ability to write the code and understand it were integrated. Thus, the socially proscribed goals surrounding math were treated to the same future-oriented projection as piano, gymnastics and rapier fighting although with negotiated outcomes.

For these autodidactics, interests were conceived in terms of goals that challenge them. While goals mediated interest by infusing onerous tasks with importance, these goals were also ill-defined at the beginning. Goals evolved once a critical mass of knowledge and skills were learned which allowed the autodidactics to subject socially proscribed goals to future-oriented projection and were either integrated or negotiated.

Analysis Of Goals

For these autodidactics in this context, they conceive of interests in terms of goals inherent to their pursuit. These goals and the challenges associated with them add meaning to their pursuit, import to their fulfillment and enjoyment to the experience itself. As these autodidactics pursued their interests, defined their goals, and engaged with knowledge along the experiential continuum, the sub-themes of mediated interest, goal evolution and negotiation emerged as important elements which can aid our understanding of how goals function in autodidactic education. In this section the general qualities of goals will be explored before moving to an analysis of the sub-themes. While goals are intimately connected to autodidactic notions of choice, they are analytically separated here in order to tease out relevant results so as to better understand how goals relate to interests, their pursuit and engagement with rationalized subject matter and thus inform curriculum iterations in different contexts with people in varied lived realities.

Goals were not part of the initial discussions I had with these autodidactics because they were subsumed under the guise of interests in general. The fact that they lay under the surface of many of these conversations became apparent once I began to inquire into their notions of progress. As Miranda's quote about her instructor 'wanting her to keep going' and Max's notions about 'getting better' display, the pursuit of interests is inherently connected to goals. Conceptualizing interest as an "…impulse functioning with reference to an idea of self-expression" (Dewey, 1967, p. 124), the 'reference' includes notions of progress when the self-expression is not already realized. As Dewey reminded us, interest does not imply a culmination of 'self-expression' and we are cautioned not to take a child's interest as an accomplishment. It would appear that

once these children have taken an interest in gymnastics, art, math, sword fighting, videogame design, or writing, their pursuit invariably leads them to seek out new experiences of 'self-expression.' In other words, the idea of progress for these autodidactics was inherent to the interest itself. They could not conceive of interests in which notions of progress were not functioning with an eye for future moments of 'self-expression.'

Will thought of interests as things he wants to keep doing and things at which he can get better. In fact, Max defined progress as seeking to improve those aspects of his interest at which he was unsuccessful. This evaluation of success implies a *future* moment of 'self expression' which he has conceived; otherwise ideas of success would be mute because the interest would be viewed as an accomplishment. This conception of progress implicates the second element of goals, namely the notion that goals must be challenging.

To conceive of progress as inherent to an interest does not automatically imply a great degree of difficulty or effort in accomplishing this progress. However through observations and interviews it was apparent that goals and the progress they encompassed were indeed challenging. In fact, Jack expressed his belief that a goal had to be challenging or there was no point in calling it a goal. Whether it was conditioning, practicing drawing, performing blindfolded sword exercises or reworking the plot in a story, the challenging aspects of these interests were specifically sought out by these autodidactics. Will talked about an especially difficult piece of music as the 'pinnacle of my dreams' and Miranda and Max changed classes, so as to be challenged and not left to 'just play around,' while Jack organized a writer's workshop to challenge his ability to

communicate to others in the pursuit of improving his writing skills. Every interest described and observed had challenging elements, and most were framed by discussions of goals and progress.

This challenging element to goals and the pursuit of interests is copasetic with the research of Mihaly Csikszentmihalyi (1990) who explored the elements of what he called optimal experience or flow. One of the elements of optimal experience he found was that people felt enjoyment, and thus sought out activities, where "the opportunities for action perceived by the individual are equal to his or her capabilities" (Csikszentmihalyi, 1990, p. 52). Optimal experience lies in the balance between challenges and skills, and thus for these autodidactics a goal that is too easy is not conceived as a goal at all. As Miranda stated,

> Well, I still really want to do fencing because with the boffer I'm kind of smaller than most of the people and the people who are smaller than me are kind of easy to fight and beat…. And I didn't feel like I was improving because I was fighting people who were way better than me or way… (Miranda, interview, March 24, 2009).

Autodidacts sought out instances where their skills were taxed; instituting progression in light of goals defined in socially proscribed settings. While this social proscription will be analyzed later, for now the important issue is the place of challenging situations in autodidactic pursuits.

Autodidactic interests conceived within a framework of future self-expressions are pursued through activities in which skills are well matched with the challenges resulting in a progression of skills and knowledge. As Miranda states, "you would pretty much get better if you draw dolphins everyday" (Miranda, interview, April 1, 2009)

Thus, goals in general contain elements of progression and challenge, and in the next section will be explored for their function in mediating interest.

Analysis Of Goals And Mediated Interest

Due to goals containing the elements of progress and challenge, all of the autodidactics expressed the belief that in order to achieve their goals they had to 'work at it.' The necessity of challenging situations for progression in light of goals was also linked to activities that were less enjoyable in themselves. While observational data did not uncover moments where the autodidactics were not enjoying their chosen activities, reconstructive interview data and process tracings bespoke of elements of interest pursuit that were not deemed enjoyable in themselves, but rather were undertaken for their benefits in achieving a related goal. Similar to the contextual influence posited within the SDL literature in which pursuits were heavily influenced by the setting in which pursuits took place (e.g. Roberson & Merriam, 2005; Spear & Mocker, 1984), many autodidactic goals were pursued in contexts whereby related activities were structured that purported to help people achieve their goals.

In gymnastics, dance and rapier fighting conditioning was framed by the context to be necessary for progress. In writing, art, videogame design, and acting certain activities were deemed necessary for progress and goal attainment. Thus the context influenced the pursuit of interests in such a way so as to make certain activities integral to the attainment of goals that were not part of the actual interest itself. For example, the conditioning in gymnastics class was separate and distinct from the performance goals that Max and Miranda talked about, and yet they were deemed necessary to achieve those

goals. Whereas Will's memorization could be construed as directly linked to his performance goals, it is important to note that Will separated this from the actual performance because line memorization allowed him to focus on other aspects of acting (e.g. voice inflection, blocking, motivation of the character) that he viewed as more integral to the actual goal. Thus all of the autodidactics participated in activities that were related to their goals while simultaneously distinct from the actual performance of the interest, and they viewed these activities as integral to progressing and achieving their goals.

These related and yet distinct activities implicate Deweyen notions of mediated interests and the place of goals in determining the pursuit of interests.

> It is all a question of relationship, whether it appeals or fails to appeal; and while the little child takes only a near view of things, as he grows he becomes capable of extending his range, and seeing an act, or a thing, or a fact, not by itself, but in its value as part of a larger whole (Dewey, 1967, p. 126).

For Dewey mediated interest was viewing an act, thing or fact in relation to the larger issues of goals. Immediate interests are those moments of self-expression without an end in mind such as play, while mediated interests contain goals or ends which revalue related yet distinct acts, things or facts as means to those ends. Thus, related yet distinct acts were revalued as an important element of reaching ends: conditioning was revalued as a means to do tricks on the rings or a round-off back handspring; participating in a writing club was revalued as a means to the end of writing a good book; drawing countless shapes and shadings was revalued as a means to the end of drawing realistic trees; and memorizing lines was revalued as a means to the end of a good acting performance. Additionally, these related yet distinct acts, things or facts were not simply

appended to the ends, but they became revalued and the difficulty of these means was actually seen as a positive. The positive affect generated by revaluing was displayed as Miranda relishing the difficulty of conditioning and seeing the progress in her shapes and shading, or Will enthusiastically memorizing his lines, as well as Max's insistence that conditioning is fun as long as it is combined with his performance goals.

The link between means and ends is shown most clearly in Max's counter example in which his performance goals are not being attended to and thus conditioning is no longer revalued. In other words, absent the goals the means become devalued. The connection between means and ends are Max's "two-sides" of gymnastics. He doesn't want to be left to just "play around," thus declaring this interest to be 'integral to the self' while he also wants the means to be connected to his ends. If the means are directly related to the ends in the mind of the autodidactic, then the mean is given "new significance in consciousness" (Dewey, 1967, p. 127). However devoid of the opportunity to relate this to his ends the significance is lost. Will utilizing ends to revalue memorization also shows the power of ends to revalue previously devalued acts, things or facts. This is not simply transferring an onerous task onto a valued one, but rather the ends suffuse and saturate the means.

'Imagining what would happen,' in a future production Will purposefully relates the means of memorization to the ends of a good performance. Memorization is no longer an onerous task that must be completed, nor is it a task that staves off public humiliation, but it is the means by which his future production goals are reached and he finds the time doing it significant, important and ultimately enjoyable. Thus, it is the

goals, or ends, that allow these autodidactics to 'work at it' through onerous tasks that have been revalued as part of a larger whole.

For these autodidactics, their goals allowed for challenges and contained notions of progress. Additionally, goals were part of an important process by which difficult, onerous, and sometimes tedious aspects of the pursuit of their interests were revalued and gained significance in their consciousness. Being able to understand the connection between means and ends was an important aspect of their pursuit of diverse interests. However, if this analysis is to be useful to different curriculum iterations, then the development of goals within the varied interests of these autodidactics must be explored.

Analysis: Goal Evolution Through Integration

Interests and their pursuit are intimately connected to goals that are defined as progress, afford challenges, and important in the process by which acts, things and facts are given 'new significance in consciousness.' Yet these goals are not developed in acontextual independent moments, but are rather worked out as the interest is pursued. From ill-defined goals at the beginning of interests, these autodidactics seemed to refine their goals in light of knowledge and skills experienced in the pursuit of their interests. Thus the related aspects of goal evolution and a community of practice (Lave & Wenger, 1991) will be explored, and it is hoped this analysis will inform goal setting and evolution in different settings of curriculum construction.

It is clear from Jack's description, as well as the other subjects in this study, that in the beginning of a pursuit the goals are ill-defined. Other than the general goal to progress in basic skills and understandings associated with gymnastics, rapier fighting,

art, writing, videogame design, piano, history, acting or dance, these autodidactics immersed themselves directly in communities of practice (Lave & Wenger, 1991), or through communicated knowledge associated with communities of practice. Whether it was looking at art books, history DVD's, videogame tutorials and music websites, or taking classes in theater and dance, the pursuit of an interest took place within the Deweyen sense of socially generated knowledge. Thus, the knowledge and skills they experienced formed the context in which these interests were pursued even though the initial goals were ill-defined. This is copasetic with findings from the SDL literature that goals at the beginning of an endeavor are ill-defined (Taylor, 1987).

Within these communities of practice, autodidactics find the knowledge and skills associated with their interests, and through goal evolution we have one aspect by which this influence occurs. The present competencies that are formulated and disseminated by communities of practice are similar to Dewey's sense of "standard ideas" (Dewey, 1980b, p. 189) and the place of rationalized subject matter that directs the socially proscribed ends and means of a particular area of interest. For it was not until Jack became immersed in the SCA, aware of its values and knowledge, that he even became aware of possible goals which he then integrated into his interest.

Integration is a specific concept from the SDT literature that refers to the "transformation of that regulation into their own so that, subsequently, it will emanate from their sense of self." While obviously implicating notions of the self that are possibly problematic and outside the purview of this study, the concept of integration nonetheless holds explanatory power. Considering how Miranda identified her goals from within the context of her gymnastics class, it appears that autodidacts integrate goals

from communities of practice into their own goals, and this is one way to explain how autodidactics' goals evolve from ill-defined ideas of progress to specific goals generated from the values, knowledge and skills experienced in socially generated knowledge. For it is not only through formal classes and groups of people by which goals evolve, but also through the communicated knowledge of books and websites. Thus, just as Jack integrated the goal of becoming a Cadet and then a Don within the SCA, Miranda integrated notions of realistic depictions in art from the books she utilized to pursue her interest. However, not all goals emanating from socially generated knowledge within communities of practice are integrated, and so it is to the negotiation of goals that we now turn.

Analysis: Goal Negotiation

Thus far goals have been shown to mediate interest and evolve from contact with socially generated knowledge in which autodidactics interact with values, knowledge and skills all along the experiential continuum within communities of practice. However, not all socially proscribed means and ends are integrated into the interest of autodidactics, and thus we must explore the process of negotiation as they determine which values, knowledge and skills they will attend to and which ones will be ignored.

Once again Will's interest in the piano began with ill-defined goals as he wanted to 'learn new things.' After the basic skills were learned he sought out a piano teacher to help him pursue his interest who introduced him to values, skills and knowledge associated with the community of practice. In the beginning of this pursuit he attempted to learn sight reading, a highly valued skill within the community that led to performative

goals which must have seemed familiar to him as they were similar to acting and rapier fighting. However as he learned additional avenues of pursuing piano and music in general, Will negotiated his participation in one aspect of playing the piano with alternative avenues that did not necessitate the same skills. By engaging in future-oriented projection, he negotiated which socially proscribed goals he would integrate and which ones he felt were not necessary for his own pursuit.

This future-oriented projection is similar to Dewey's notion of aims that result in continuously redefined goals found in the SDL literature. Dewey defined aims as acting with the ends-in-view in mind, and linked aims to intelligent pursuit.

> The net conclusion is that acting with an aim is all one with acting intelligently. To foresee a terminus of an act is to have a basis upon which to observe, to select, and to order objects and our own capacities. To do these things means to have a mind- for mind is precisely intentional purposeful activity controlled by perception of facts and their relationships to one another"(Dewey, 1980b, p. 124).

In looking at the possible avenues of pursuit that playing the piano affords, Will was attempting to pursue his interest with the ends-in-view. Deciding that music competitions and orchestral piano did not seem especially meaningful to his present interest, he chose alternate courses of pursuit. Similarly, he and Max dismissed the book's goal of a wider conception of statistical probabilities and instead focused their attention on those aspects of the subject matter that impacted their ability to write programs. They looked to the 'terminus of an act' as the evaluative basis to determine if the information was worth the effort.

Jack also displayed action with the ends-in-view when he chose to pursue the specific history of weapons, wars and politics while simultaneously disregarding the religious history which was a large part of the DVD's he had been watching. Focusing

on historical groups specializing in martial arts, he acknowledged the importance of religious history in its impact on politics, war and weapons, but sought out resources that were more in line with his ends-in-view of martial arts experts. Thus, all of the autodidactics utilized ends-in-view to direct their actions in the pursuit of their interests. In this way, they negotiated their integration of values, knowledge and skills offered by socially generated knowledge.

For these autodidactics, their goals allowed for challenges and contained notions of progress. Additionally, goals were part of an important process by which difficult, onerous, and sometimes tedious aspects of the pursuit of their interests were revalued and gained significance in their consciousness. Goals were also an integral component of their chosen interests. As Jack pointedly exclaimed, "If you choose it (an interest), it has a goal" (Jack, interview, April 22, 2009). While these goals are ill-defined at the beginning of an interest they still contain notions of progress and allow for challenges. Goals were also an important component in the process of revaluing difficult aspects of a pursuit in which they gained significance in consciousness and were viewed as part of a larger whole. Additionally, it was found that goals are integrated from socially generated knowledge encountered through communities of practice and communicated knowledge. Lastly, these socially proscribed means and ends are negotiated as autodidactics utilize a process of acting with ends-in-view, and results in goals that are constantly being redefined. Along with the highly interrelated themes of choice and goals, problem situations arise as a third component of interests, their pursuit and the place of rationalized subject matter. It is these problem situations that the next section explores for its relevance in utilizing autodidactic principles with different curriculum iterations.

4.4 THEME THREE: PROBLEM SITUATIONS

Arising from the data, choice and goals proved integral to autodidactic conceptions of interests, their pursuit and their interactions with rationalized subject matter. Choice for these autodidactics was the penultimate emic feature of autodidaxy and associated with: 1) their commitment to the endeavor; 2) connections made along the experiential continuum; as well as 3) the confidence they perceived in their ability to learn and to organize their social environment for further learning. Goals were viewed as a general progression that offered challenging situations which contextualized their pursuit and offered interaction with rationalized subject matter. Goals: 1) mediated interests; 3) evolved from a beginning state of ill-definition to an integration of goals from rationalized subject matter; and 3) implicated moments of negotiation. The final theme explored in this chapter relates to problem situations managed by the subjects at various points in their autodidactic endeavors. Problem situations in this context refer to experiences designated by the subjects that either originate in the 'hard conditions' of the environment or act as a 'road block' in their pursuit of an interest. A better understanding of how difficulties are conceptualized and managed will benefit curriculum iterations in varied contexts with people in different lived realities.

Interviews and observations focusing on autodidactic interests began with lists of activities associated with those interests and a stress on the importance of choice. However after these initial discussions, further interviews in conjunction with observation and process tracings yielded rich data on the place of goals in their conception of interests, their pursuit and the place of rationalized subject matter. The final theme to arise was a focus on problem situations at the inception of interests as well

as numerous difficulties throughout the pursuit. Thus the process by which these problem situations contextualized and impacted their interests and the pursuits needs to be further explored. Subsequently, after initial considerations of how problem situations relate to the initiation of interests, three sub-themes will be utilized to structure an exploration of problem situations as autodidacts: 1) assume an exploratory stance by which they actively search for problem situations; 2) mobilize resources utilizing habitual patterns of pursuit; and 3) in some instances ultimately assess the usefulness of particular interests. First, autodidactics were found to actively search for problem situations as their environment and the context of their lives interacted to culminate in an exploratory stance where questions were highly valued. Secondly, during the pursuit of interests autodidactics took conscious control of habitual patterns by which they sought out resources to confront problem situations. Finally, some problem situations initiated consideration of the overall interest as autodidactics questioned the ultimate usefulness of these pursuits. A better understanding of how autodidactic interests are initiated, as well as how they search for problem situations, deal with difficulties within the pursuit of interests, and ultimately determine the usefulness of those interests for their lives will allow notions of problem situations, choice and goals to be utilized in different curriculum iterations.

An exploration of problem situations within autodidactic pursuits will once again begin with expository narratives which are a conglomeration of interviews, observations and process tracings. This narrative style will allow for the data to be contextualized within the activities, spaces and moments in which they originally took place, however the following composite occurred over a much longer time period and in different

sequences than displayed here. After a narration of typical problem situations at the inception of autodidactic interests, the exploratory stance will be described as a contextual element of how problem situations are constructed in the autodidactic environment. Next, the narrative will spotlight the ways in which autodidactics take control of their habitual patterns of pursuit. In the last narrative section, moments will be highlighted where autodidactics discuss how problem situations initiated a questioning of the entire pursuit. Subsequently, the chapter will end with analyses of the general notion of problem situations as well as the sub-themes.

Problem Situations: In The Beginning

As I pulled into the driveway on a typically hot day in late spring all four of the kids were gathered in the driveway around a four-wheel contraption. After we all greeted each other, they explained that while they have to push the cart, the steering had been designed from ropes and pulleys attached to the front axel. As Miranda sat in the cart with the 'reins' in her hands, Will began to push the back of the cart and Miranda wove in between trees and other obstacles laughing and yelling for Will to 'go faster.' They traveled around the yard and back to the driveway with Will out of breath and Miranda, Max and Jack laughing hysterically. Once everyone caught their breath, Jack told us about his latest idea for an invention.

> Jack: Well, I most recently had an idea, this is one of my more recent ideas I had. When your car battery runs out you have to go jump it. And before the cars had batteries, you had to turn a little crank to start your car, so I thought they should have an emergency crank to start your car…. I guess our car had stopped working a couple of times, or in other people's cars. And I just thought, you know, back in the day they have those cranks. They should put them in now, so if your car battery runs out. And they have the flashlights that crank too.
> Tom: Did you know that before?

> Jack: I think I knew it, but I don't think it had much of a connection. Or I knew that electricity could be generated by a crank. And so I thought, you know, or that there was a way to start a car. I don't know if this is actually possible, but I thought it seemed like a good idea…. Have an emergency little crank for your car (interview, March 24, 2009).

In this discussion, Jack noted that his recent idea for an invention began with a problem situation. He connected their car not starting with the inception of this interest in electricity. Within this exploration he had thought of other ways to generate electricity, such as cars 'back in the day' and flashlights that utilized a crank instead of batteries. Thus while he drew on these experiential examples, he attempted to apply principles of electric generation to the identified problem situation. In a previous discussion, he utilized the same experiential basis with bikes, boats and planes while trying to develop another invention that could fly, roll and float for use on windy beaches where he and his family had vacationed. The important point is that he defined the initial pursuit of all of these endeavors as a response to problem situations.

While discussing these inventions with Jack, each of his siblings took turns steering and pushing their latest creation while intermittently laughing and talking about the 'glitches' in the design. After awhile, red-faced and exhausted they tumbled back into the house and searched for lunch. As I took my seat at the table, they continued to talk about their ideas for inventions and Max began animatedly discussing his latest videogame idea.

> I think the videogame would be fun for me. Because that's what I go for. I don't know how many people share my opinion in games, but really what started with me creating video games was me having problems with ones that are already made. Like, some games I just found boring, others too hard, some too easy. Others you'd beat too fast. Others you just get stuck (Max, interview, March 3, 2009).

While also displaying notions of challenge associated before with optimal experiences (Csikszentmihalyi, 1990), Max's interest in videogame creation was explicitly discussed as a direct response to problems experienced while playing other games. Subsequently, the countless notebooks he had filled with intricate designs covering everything from character development and plot design to controls and levels (observation notes, March 24, 2009) was directed at solving problems he had experienced in other games. The inception of this interest which had led Max to *Flash Player* tutorials and writing screen plays began with the problem situations first experienced while playing videogames. Thus, Jack's interest in inventions and Max's interest in videogame design began as responses to problem situations directly experienced in the course of living their lives. However, not all interests are directed towards creating specific objects to solve problems, as others are directed at solving conundrums found in the general context of the autodidactic's life.

Lunch was drawing to a close and with it the conversations that centered on the cart and Max's videogame designs. Inspired, Max asked Will to work through another chapter in the *Flash Player* tutorial and Jack lingered to talk to his mom about going to the bookstore. I took this opportunity and asked Miranda about her interest in the science of space. Earlier in the discussion she had briefly mentioned an interest in gravity and space and I wanted to try to trace its inception. She explained,

> Well, I kind of wondered why the earth and the moon are round. Like I know they're not perfectly round, but …. Because I think the moon is like a piece of the earth that fell off, like when there wasn't a lot of gravity. And I don't really understand why it's round; like it's pretty round. Then I've kind of wondered, because since there's no gravity and there's no wind to like compact it all together, I don't really understand how it became so round (Miranda, interview, March 23, 2009).

Miranda was attempting to better understand the moon's properties and development. It was her focus on the dimensions of the moon that prompted a problem situation and led to an interest in space and satellite constitution.

Problem situations were sometimes characterized as a wondering, or an experience that defied explanation. For Miranda the roundness of the moon did not match her understanding of space as a vacuum lacking gravity, and was therefore conceptualized as a problem situation that incited an interest in space and the properties of planets and their satellites. This not only broadens the understanding of problem situations and their importance at the inception of autodidactic interests, but also implicates the first sub-theme, namely the exploratory stance of these autodidactics.

An Exploratory Stance

After Miranda explained her interest in the moon she wandered over to see what Max and Will were doing, sat at the other computer and began to work on an ongoing project where she utilized *Google Sketchup* to create three dimensional houses. This interest too was started in a problem situation where the autodidactics were included in the remodeling of the house. While this interest began with a problem situation that included materials, a budget, colors and spatial parameters, Miranda had since pursued this interest beyond her own house and explored multiple on-line programs in addition to Google's three-dimensional program (process tracing, April 1, 2009). Miranda and the rest of the family were all involved in the remodel as decisions had to be made about colors, materials and the floor plan within the constraints of budget and space. This example shows how the themes of choice and context interact with problem situations to

incite interests. However, the important point here is that the interest began with a problem situation that Miranda was open to pursuing. This is similar to the value placed on questioning discussed in the context section of this chapter. However, the emphasis here is on how this questioning stance interacts with the autodidactics' environment to create an exploratory stance whereby they sought out problem situations.

I focused back onto the table discussion between Jack and Katarina as they discussed the bookstores they were going to later that day. Will explained his prowess at judging books by their covers and the process he goes through in selecting books which included *Amazon* reviews and video reviews on *YouTube*. He had recently watched an interview with three different authors where they discussed writing and the process of developing story lines. I asked him about his present writing ideas, and he discussed the magic system he had been developing. Jack explained,

> Like you can't bring someone back from the dead because of this, and you have to form a reason for why that can't happen, and a believable reason rather that just saying…. Like some stories they don't even talk about magic that brings you back from the dead. They don't say why you can't do it. They don't even say you could do it. They just don't talk about it and so you have to know your magic's limitations, otherwise, it leaves inconsistencies and plotholes and stuff…. I've noticed them in other stories and so I want to try to make a story that doesn't have those problems (Jack, interview, March 24, 2009).

Like Max and his problems with videogames, Jack saw problems in the magic systems developed by other authors and wanted to create his own system that was consistent. He also was open to identifying problems within other stories, and thus initiated his own interest in creating a magic system without those problems. Once again, this example shows the place of problem situations at the inception of specific interests, however, the exploratory stance was operating beneath the surface. Identifying problems in the world

around them was one way in which they conceptualized their interests, but the stance was still unclear until Will described how unstructured time operates in this autodidactic context.

Leaving Max to proceed with the tutorial without him, Will joined us at the table and talked about the slower pace of life now that the play classes were over. Will explained,

> I just think sure, learning something that's interesting to you right now, it can be fun and it can be stimulating because you're learning something new and that's always fun. And it gives you something to work at because a lot of times you know, especially now after the plays, I don't really have anything to work at. I mean during the plays that's almost like my school. At home I'm thinking about the plays, you know. I'm working on that and I'm practicing my lines and doing all sorts of stuff. And sometimes it does get kind of 'man, that's a lot of work to do.' But then afterwards it's always kind of boring for awhile. And so, sure, I'll play games and I'll do stuff, but I'm not working on something, and I think that's what gets to me and makes me go crazy (Will, interview, May 1, 2009).

This stance is difficult to comprehend when separated from the fluid experiences of these autodidactics as they engage with their world. Will expressed his need for something to work on or it makes him 'go crazy.' Thus, unstructured time, ubiquitous knowledge and the value placed on asking questions allowed for space whereby problem situations were identified and interests pursued. Will then added, "At the moment I'm not completely motivated to learn anything, so I just kind of go about reading articles and asking questions (interview, May 1, 2009). Thus, whenever a 'lull' occurs they explore resources around them and ask questions in their attempt to stay 'sane.' It would appear that due to a nexus of contextual factors (e.g. unstructured time, ubiquitous knowledge) in their lives, these autodidactics search out problem situations which incite interests they can 'work on,' which I have labeled an 'exploratory stance.' Thus, these autodidactics'

exploratory stance arising from a nexus of contextual factors led to the identification of problem situations, conceived as 'road blocks' or conundrums, which incite an interest and lead to its pursuit. A type of productive boredom motivated these autodidactics to seek out problem situations in their environment. However, problem situations were also experienced during a pursuit, and it is to these moments that the narrative now turns.

Habitual Patterns Of Pursuit

As Max and Miranda continued with their work on the computers, Jack and Will decided to fence in the front yard. In between bouts they discussed techniques and tactics, and I asked general questions about their pursuit of sword fighting.

> What was funny to me was when I asked for books, one of the guys was impressed because supposedly there has been no kid or adult he'd ever taught that had ever asked for a book to read. I thought that was interesting because to me it was a natural thing. I was like, you know: something I like; want to learn about it; a book (Jack, interview, June 6, 2009).

For these autodidactics, books were sought as a common response to interest pursuit and were often initiated by problem situations. Miranda's difficulty in drawing faces led to books; Max's discontent with other videogame creating software led to the *Flash Player* tutorial; and Will's unfamiliarity with some of Shakespeare's plays led to 'a great little book that explained them all' (observation note, March 24, 2009). During the pursuit of an interest, whenever a problem situation was experienced, books were one of the first things considered. However, these attempts to mobilize resources for the expressed purpose of navigating their pursuit did not always solve the problem situation, and other patterns would then be initiated. Jack continued,

> There's something I didn't quite understand … I might just ask them another question, or…. There was a class, a couple of classes I took at the 'Rapier

> Academy' thing that I went to one weekend. And I happened to find that the guy who taught that class had obviously taught it at another event, and that was on YouTube. And so I was glad that I had that because I thought it was a good concept, but I couldn't remember. Because there wasn't a handout and it was like an hour-long class and so some of the more finer things, more complex things in that class I couldn't remember exactly. So I've watched that again, to kind of refresh my memory (Jack, interview, April 22, 2009).

Jack took classes in his pursuit of rapier fighting and enjoyed learning more about the techniques and tactics involved, but he could not remember many of the 'finer things' discussed. Acknowledging that he would normally ask questions, here he was met with a situation where the knowledgeable person was unavailable. His response to this problem situation was to search the internet for videos that may contain similar material, and he found the specific expert discussing exactly the points he wanted to remember.

The internet was used by all of these autodidactics whenever a 'road block' or problem situation was experienced during the pursuit of an interest. Whether it was searching for an unknown concept, or video reviews of books and games, or design sites describing genres of interior design, internet use was a habitual pattern whereby these autodidactics attempted to solve problem situations experienced during the pursuit of an interest. This was similar to the choice of how to pursue an interest discussed in theme one, however in these instances it was in direct response to a problem situation experienced during the pursuit. Jack's initial response to a difficulty in the pursuit of this specific interest was to ask questions of a knowledgeable person. However, there were also instances whereby these autodidactics attempted to solve problem situations by seeking out classes in gymnastics, piano, sword fighting, videogame design, dance, astronomy, history and math. In all of these situations problem situations initiated

habitual patterns of pursuit utilized by the autodidactics in gathering resources for a solution.

The heat proved to be too much for a long practice session and Jack and Will headed back into the house as Miranda came out in search of one of their cats. She danced across the lawn and told me of her upcoming dance performance. She explained that she didn't like the class at first because she didn't know anybody, but now she had made friends and was more comfortable. She then described how this translated into her activities in the class.

> I guess I just saw other people asking and talking, not being shy or something. And just kind of like, if I asked and something and it really helped me, well then I should do that with all the other things I need help with (Miranda, interview, March 23, 2009).

For Miranda, asking questions in her dance class was a habitual pattern she learned in the class from watching others, but then she seemed to generalize this pattern to other areas of interest with different problem situations. Thus, she seemed to learn this habitual pattern, and as I focused on this aspect of these patterned responses to problem situations another important element became evident.

By this time we were both tired of the heat and went inside. Miranda sat at the art table and proceeded to flip through a stack of papers with eyes half drawn. There were literally hundreds of differences in the drawings including colors, shape, shading, size, and proportion. She explained that she was having difficulty drawing eyes and after getting a book on drawing faces she started systematically practicing the different eyes in the book. I asked how she decided to continue this pursuit and she responded,

> Instead of just drawing it once and then just walking away because I couldn't do it that first time, I'll keep trying or I'll take a break or I'll look at a book or, you

> know, I'll actually try. And try to figure out something that could help me. I don't just give up like, 'I can't draw this.' From … I guess my mom (Miranda, interview, July 6, 2009).

Miranda lists her habitual patterns by which she attempts to solve problem situations including books, breaks and repeated attempts while attributing all of them to her mom.

Thus for these autodidactics problem situations experienced during the pursuit of an interest resulted in habitual patterns whereby they attempted to garner resources for a solution. These included asking questions of knowledgeable people, books, and the internet while continuing repeated attempts of the blocked pursuit. Additionally, Miranda attributed these patterns to her mom, and expressed an intense persistence in the face of difficulties. However, persistence was not always valued as particular problem situations resulted in these autodidactics questioning the entire pursuit.

Assessment: Questioning The Interest

I noticed Will had joined Max again for more work on the computer. They were attempting to write a second program with the 'six-sided die rolling' code, and were laughing at the outcomes they were adding to their game. They then showed me some other *Flash* games you could play on the computer. They were very excited about a ninja game that had 'very real physics' coded into the movements. They showed me that when the character ran into a wall, they rebounded in a 'real' way (process tracing, April 1, 2009). Max began to talk about how *Flash Player* had allowed him to pursue his videogame design. He explained that *Flash* was better than the programs he had tried earlier that only allowed you to modify certain aspects of an existing game because "they just didn't let you change what needed changing" (Max, interview, March 23, 2009). At

this point I asked Max what led him to seek out different ways to pursue videogame production.

> I think if you're doing something and you're enjoying it, I don't think you stop to think, 'why am I doing this?' I think you just do it because it's fun. I mean I'm sure there are some reasons, but when you go to do whatever and it's fun, then you're not going to be thinking, 'oh, maybe I shouldn't be doing this' or why am I doing this?' It's only when there is a lull, a road block (Max, Interview, June 9, 2009).

As long as a pursuit was proceeding, Max did not question the pursuit or the interest. However, when a 'road block' was experienced it led to questioning the interest itself. Max asked questions that were not about the pursuit, like looking for a different program, but actually questioned the interest itself by asking 'why am I doing this?' This question seems to insinuate an assessment of the reasons for the interest.

At this point Will began to talk about the connection between math and computer programming,

> Ok, if you say, 'I should probably learn some math if I want to be a computer programmer,' that makes sense. But if it's just, 'I should learn some math,' then it becomes, you know, if you should learn some math then it isn't really your choice to learn (Will, interview, June 9, 2009).

Will stated that it 'makes sense' if you are learning math in order to be a programmer. However, if there is no connection for math, if it is not to be used for anything, then Will cannot conceive how choice could be operating in the decision. For Will, if math was not being utilized for something then choice was not evident, enjoyment would be lacking and the pursuit would be abandoned. Once again, if a problem situation occurs during a pursuit, it may lead to an assessment of the interest, but for Will that assessment inherently involves the notion of usefulness.

This conversation attracted Jack and he and Will began to discuss math and its applications.

> Jack: If I sat down, I think I would be. I think I would bore myself if I tried to learn math. Not that math isn't interesting, but …
> Will: that's the important point. If you, if it's a learning off of a 'should' then it's usually not going to be very fun.
> Jack: but also if there's something I need math for like college or whatever, then it will maybe be a sh…, it will be a different kind of thing. It will be, 'I'm doing this because there's something I want to do. I need to do this.'
> Will: I need to do this, rather than I should do this.
> Jack: I need to do this to get this. Which is different than a 'should' I guess (Jack, interview, June 6, 2009).

Thus, a 'should' was conceived as an interest without any usefulness. Additionally, Will stated that "learning off of a 'should'" would not be enjoyable implicitly leading to a problem situation within the pursuit. Once assessment began, the usefulness of the interest would be called into question and apparently abandoned. Will explained further with a concrete example of how his interest in long division that arose from his confusion of how to do math 'like a calculator' was abandoned after he kept forgetting the algorithm.

> I wasn't using math for something that I enjoyed. So, if I'm not like… if I'm not for some reason… if I don't just love math for one reason or another, then I want to use math for something that I do like. And at that point in time I don't, I didn't have anything that I liked to do that I needed math to do it better or take it to the next level or whatever (Will, interview, April 1, 2009).

This was not simply experiencing a problem situation within the pursuit of an interest and then changing the course of that interest, but rather a complete assessment of the interest itself. If the interest was not intrinsically enjoyable and a problem situation developed, then assessment took place. Additionally, if the interest was not useful, if it could not be connected to any other valued interest in the autodidactics' mind, then it was abandoned.

The interest was defined as a 'should' instead of a 'need,' and thus the entire pursuit stopped. It is interesting to note that this assessment was not begun until a problem situation was encountered. However, after assessment began, the autodidactic appeared to go through a decision process different than altering the pursuit of an interest because it questioned the interest itself.

Integrally linked with context, choice and goals, problem situations emerged from the data as an important factor in autodidactic interests, their pursuit and the place of rationalized subject matter. For these autodidactics, problem situations incited interests and their exploratory stance created space for the attention to problem situations in their environment. Additionally, problem situations encountered during the pursuit of an interest initiated habitual patterns of pursuit and at times led to an assessment of the interest itself.

Analysis Of Problem Situations

In the following section, problem situations will be analyzed first for its general importance in the beginning of interests followed by three sub-themes. First, the exploratory stance of these autodidactics will be explored with close attention to context. Secondly, the habitual patterns of pursuit prompted by problem situations will be explored, and finally the assessment of interests themselves will be analyzed as problem situations lead to a reconsideration of the usefulness of interests no longer inherently enjoyable. While notions of problem situations are intimately connected with choice and goals, an attempt is made to keep them analytically separate before exploring possible connections so as to increase our understanding of this important construct within

autodidactic interests, their pursuit and the place of rationalized subject matter. This is especially difficult in regards to goals due to overlapping theoretical constructs which pertain to both themes. However before the analysis begins in earnest, it is important to attempt analytic distinction before discerning their interrelationships.

Goals were viewed as a general progression that offered challenging situations which contextualized their pursuit and offered interaction with rationalized subject matter. Goals: 1) mediated interests; 3) evolved from a beginning state of ill-definition to an integration of goals from rationalized subject matter; and 3) implicated moments of negotiation. Thus, the theme of goals focused on mediated interests that afforded the means to be suffused with the ends, as well as integration and negotiation of socially generated knowledge associated with communities of practice (See Diagram 1 below).

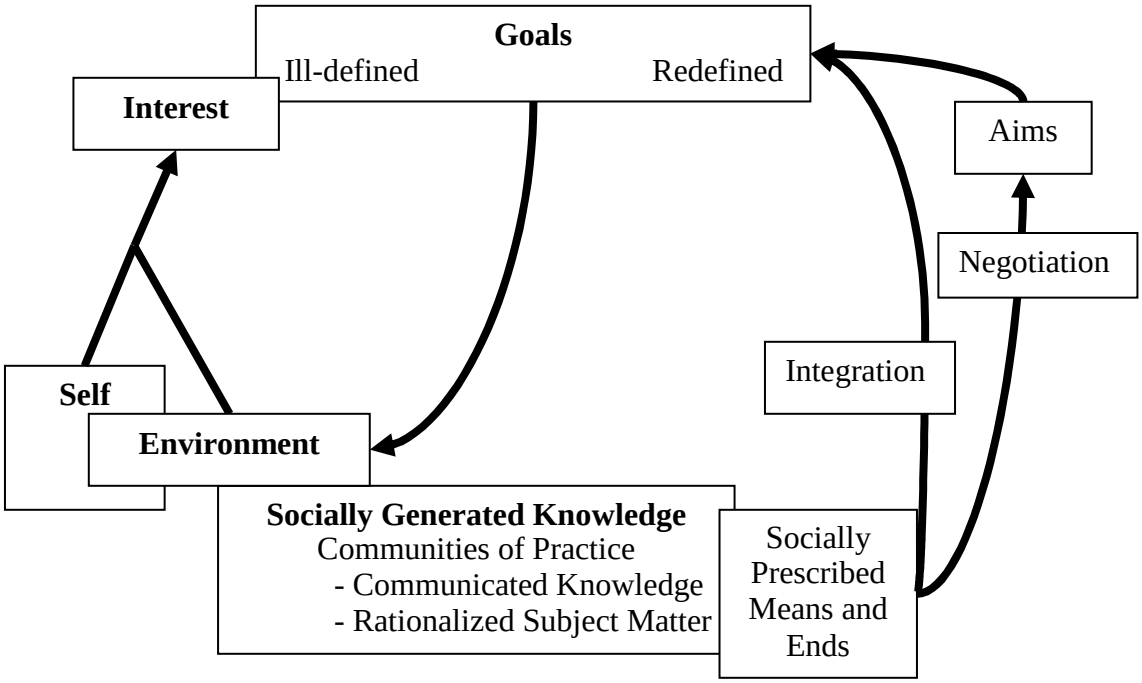

Diagram 1

However, problem situations focuses on the processes within autodidactic endeavors whereby: the 'hard conditions' of the environment in conjunction with a 'self' in that environment initiate interests; the context of autodidaxy affords an exploratory stance which aids the recognition of problem situations; 'road blocks' during a pursuit lead to the conscious initiation of habitual patterns of pursuit; and some problem situations initiate moments where the interest itself is assessed for its usefulness (see Diagram 2, below).

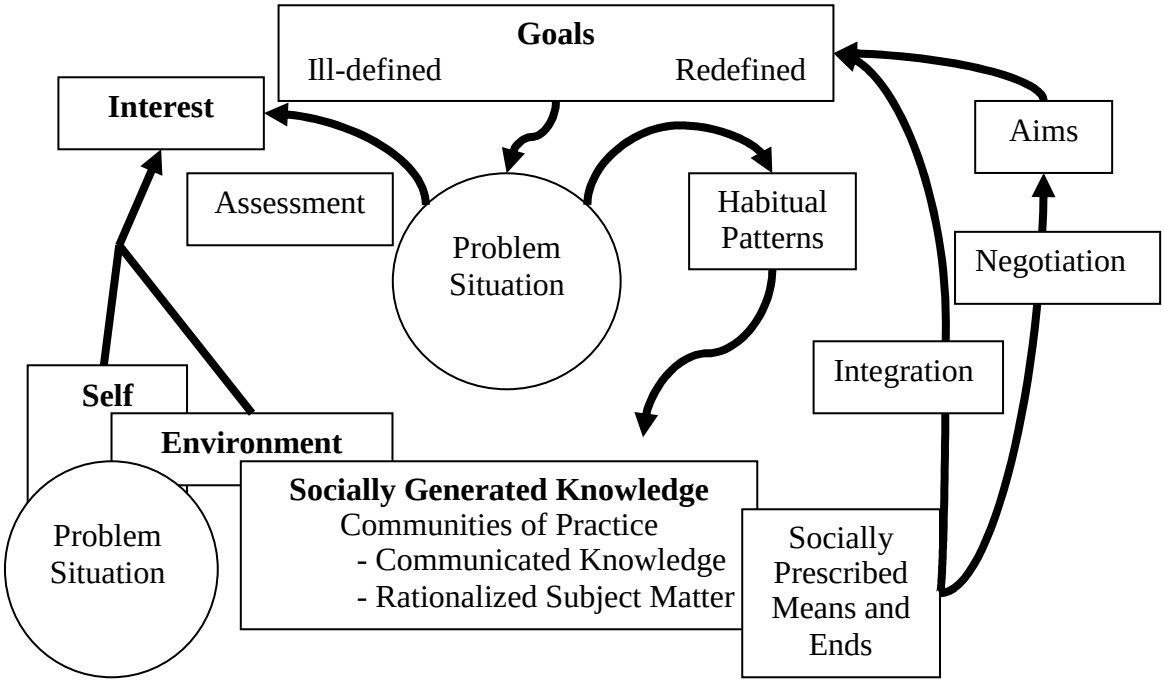

Diagram 2

While problem situations were readily identified early in this study of autodidaxy, it was not until much later that the full import of this theme became clear. In light of chosen interests and their associated goals, problem situations at first seemed to be a contextual component of the interests themselves. Indeed, interests at their inception are almost

inescapably intertwined with goals so that it was difficult to conceive of this theme as analytically separate. However, as the autodidactics themselves referred to problem situations their comments began to coalesce along the 'lifespan' of an interest with different qualities and elements.

The inception of an interest in many cases is a response to a problem situation that arises out of the environment. As Dewey remarks, the interests of the child arise "due in part to the stage of development at which he is arrived, in part to his habits previously formed, and to his environment" (Dewey, 1967, p. 142). It is this environment with its 'hard conditions' that provides the experiential difficulties that initiate autodidactic interests. As Jack experienced a car that would not start due to a dead battery, his interest had an ill-defined goal. In between the person and the materials and results of their action, the interest in electricity provided Jack with the necessary results to theoretically solve his problem. Thus the generation of electricity is 'the instrument which affects their organic union" (Dewey, 1967, p. 122).

Similarly, Max's interest in computer programming was initiated by the problems he experienced while playing videogames. The environmental problems incited his interest in regards to solving those problems. This is copasetic with SDL findings in which problem situations incited adult autodidactic endeavors. Miranda's interest began with the conundrum of a round moon, inciting and focusing the autodidactic's energy towards solving the problem. These types of interests are described in Taylor's (1987) model of autodidactic endeavors as the 'disconfirmation phase' where the subject comes into contact with information that does not fit into their existing knowledge system. This in turn leads the autodidactic to pursue further information in order to expand their

knowledge system so that the new information fits into the expanded system. Thus, whether focused on a specific object with specific qualities as a solution like the examples provided by Jack and Max, or attempting to expand one's understanding to include new conceptions, problem situations from the environment initiated the pursuit of ill-defined goals. When the interest begins there is a general notion of what needs to be accomplished, but no corresponding conception of how this is to be accomplished. Thus, the problem situation informs the interest that it begins, but this in no way signifies the process by which it will be achieved. This ill-defined goal arises from a problem situation, but before the pursuit ensues there are no opportunities for mediation, integration or negotiation.

Analysis Of An Exploratory Stance

Within the flow of these autodidactics' lives, the context of ubiquitous knowledge, modulated support and space for discussion combines with unstructured time to produce an exploratory stance in which autodidactics purposefully seek out problem situations in their environment. Specifically mentioned in the correlated narrative section above, Jack found problems in stories he otherwise enjoyed and proceeded to work on his own magic system devoid of these problems. Similar to many of the interests already discussed throughout this chapter, all of the autodidactics in this study were constantly involved in pursuits initiated by problem situations. These interests were not readily available through a constructed curriculum, but rather were purposefully self-constructed. Will alluded to unstructured time as a motivating force by which he sought 'something' to work on. This 'productive boredom' results in an exploratory stance whereby these

autodidactics seemed to search for problem situations. This is similar to findings from the adult SDL literature in which autodidactics were open to learning in every context.

Danis and Tremblay find that "self-taught adults take advantage of any opportunity that random events may offer them in order to learn" (1987, p. 139). It appears that these younger autodidactics also take advantage of any opportunity to learn given they have unstructured time in a context of ubiquitous knowledge, modulated support and space for discussion. 'Productive boredom' operated as a motivating force that prodded these younger autodidactics to search out opportunities to learn. "I look at it (boredom) like hunger. You're like 'oh,' and it motivates you (Katarina, interview, March 24, 2009). While these autodidactics did not perceive boredom as a major problem, they did view it as part of the 'flow of their day, week, and season' (observation note, March 24, 2009). Dewey defines one aspect of an interest as "active and propulsive" (1967, p. 124), and thus the experience of boredom, like hunger, motivates these autodidactics to become interested by seeking problem situations by which an interest 'activates' them and propels them toward something they can 'work on.'

Even as Will confessed he was not 'motivated to learn anything' at that moment, he continued to interact with the ubiquitous knowledge available and took pride in the questions he discussed during this 'down time.' I observed this productive boredom on multiple occasions with all of the subjects, and it was apparent that the experience energized them to create opportunities for active and propulsive activities. Max talked about he usually found "things to do I haven't done in awhile" (Max, interview, April 22, 2009), and Jack "thought up creative things to do and then I won't even be bored anymore" (Jack, interview, May 1, 2009). Thus, the experience of productive boredom

combined with unstructured time and a context of ubiquitous knowledge, modulated support and space for discussion resulted in an exploratory stance whereby autodidactics sought out problem situations in their immediate environment. However problem situations were not only experienced at the inception of an interest, but occurred during the pursuit as well.

Analysis Of Habitual Patterns Of Pursuit

Problem situations during the pursuit of an interest were experienced differently than those that initiated an interest. Rather than the problems with magic systems and videogames, or the conundrums typified by Miranda's 'round moon' confusion that resulted in ill-defined goals, problems experienced during a pursuit were viewed within the context of an ongoing pursuit. The initiating problem situations experienced by these younger autodidactics were similar to the disconfirmation phase described by Taylor (1987). However, problem situations during a pursuit were experienced as something akin to Spear and Mocker's (1984) organizing circumstance which includes Dewey's notions of the intrinsic continuity of action. Similar to the earlier discussion about the evolution of goals where the focus was on autodidactics as they immersed themselves in socially generated knowledge resulting in interest mediation, integration and negotiation, the present discussion focuses more the process of how 'road blocks' are approached in the ongoing pursuit of an interest.

The organizing experience not only contains the problem situation which has led to an interest, but contains the logic of the pursuit up to the point that a road block occurs. For example, Jack's pursuit of rapier was progressing until he achieved a certain degree

of sophistication with the basic skills and strategies associated with this interest. His goals had resulted in mediated interests and they had evolved through the integration of many of the socially proscribed goals of the community of practice into the context with which he approached this endeavor. However, due to a lack of practice time with knowledgeable experts, Jack experienced a problem situation in *how* he was able to pursue this interest. At this point the organizing circumstance already contained much of the amassed knowledge, skills, strategy, goals and lore associated with this particular community of practice and Jack was trying to find additional methods of pursuit. Thus, he controlled his habitual patterns of pursuit and began to search for books, internet sites and videos by which he could continue his pursuit.

This intrinsic continuity of action results in a heuristic pursuit organized around the interest which all forms the logic for subsequent pursuit. All the autodidactics experienced 'road blocks' to their pursuit while still retaining the logic that had led them to that point. Miranda's difficulty drawing eyes, Max's discontent with videogame creation software and Will's unfamiliarity with a play he was to perform were all approached with the culmination of experiences garnered in their pursuit up to this point. Once the road block was experienced, each of these autodidactics controlled their habitual patterns of pursuit in their attempt to continue their pursuit in line with the knowledge, skills, goals and logic they had accumulated up to that point. Thus, the organizing circumstance contained the logic utilized up to the point a road block occurred at which point the autodidactics proceeded to ask knowledgeable people, search for books and internet sites, and kept trying to continue their pursuit. As Miranda stated, she tries "to figure out something to help me." Additionally, she learns to ask questions in

dance class while watching her colleagues and attributes her other habitual patterns of pursuit to her mom.

All of the autodidactics attributed their parents with teaching them specific habitual patterns of pursuit whereby they attempted to continue pursuing an interest after a road block had been experienced. Whether it was Miranda attributing her persistence in art to her mom, or Jack learning how to search the reviews on *Amazon*, all of the autodidactics were influenced by their family in how they developed their repertoire of habitual patterns of pursuit. This is similar to the finding in the SDL literature in which past experience and family background influenced autodidactics' motivation, organization and approach to their endeavors (Leean & Sisco, 1981; Roberson & Merriam, 2005; Spear & Mocker, 1984). This also implicates Dewey's notions surrounding informal, implicit knowledge as our 'most deeply-ingrained knowledge' and that all other knowledge is simply appended to it. Thus, habitual patterns of pursuit and persistence are attributed to family background and thus how autodidactics approach problem situations experienced during the pursuit of an interest are deeply ingrained and provide the framework for all other knowledge. However, this persistence is not total, and certain 'road blocks' or problem situations initiate an assessment of the interest itself.

Analysis Of Assessment

Most of this data focused on math, a contentious subject within the unschooling community due to widespread belief that while most rationalized subject matter is attainable through interests, 'higher' math does not often become applicable within autodidactic interests. Katarina referred to many families that 'unschool everything

except math.' Additionally, this subject was discussed often at the unschooling conferences I attended in 2005 and 2006. Thus, to see how problem situations interacted with this particular rationalized subject matter is important to understanding the processes which impact interest assessment within larger contexts than specific communities of practice.

The same problem situations during a pursuit that led to the initiation of habitual patterns of pursuit also at times led to an assessment of the interests that showed the limits of mediation. This assessment is similar to the negotiation of socially generated knowledge in the form of means and ends but here the focus is on how problem situations during a pursuit initiate the assessment of the interest itself as opposed to specific means and ends within an interest. Where negotiation occurs within the parameters of the socially generated knowledge associated with communities of practice, within some problem situations during a pursuit the assessment revolves around society's 'shoulds.' "I don't think I think about it as 'I need to learn math for college' though I may get some of that from society's 'shoulds'" (Will, interview, April 1, 2009). This discussion of 'shoulds' not only showed the importance of choice for these autodidactics, but also implicated mediated interests. The implication was that 'society' determining goals without usefulness violated these autodidactics' sense of the importance of choice and goals in their education. Thus, when certain problem situations were experienced, they asked 'why am I doing this?'

It is important to notice the logic inherent to answering this question. Logically answering this question meant that the information would be useful, such as if someone wants to be a computer programmer. In other words the expansive view of subject matter

posited by Dewey in which knowledge becomes subject matter as it is "reckoned with in the process of a person carrying forward an active line of interest" (Dewey, 1980b, p. 141) is operational as the logic of assessment in this autodidactic context. As Jack remarked, "I need to do this to get this" (Jack, interview, March 24, 2009). There was emphasis placed on need as opposed to 'shoulds,' and thus particular problem situations in the pursuit of autodidactic interests led to an assessment of the usefulness of an entire line of interest.

In Max's determination of mediation discussed in the theme of goals mediating interests, a close connection between conditioning and gymnastic goals needed to be maintained, however the interest of gymnastics itself was not questioned. In the data on assessment, the entire interest of math was subjected to the logic of usefulness. As Dewey's oft quoted observation reminds us, "Only in education, never in the life of farmer, sailor, merchant, physician, or laboratory experimenter, does knowledge mean primarily a store of information aloof from doing" (Dewey, 1980b, p. 193). Thus, Will assessed his math interest and determined "at that point I don't, I didn't have anything that I liked to do that I needed math to do it better or take it to the next level or whatever (interview, fencing). The usefulness of math was found wanting and thus the interest of math was stopped until it was needed. "I *need* to do this, rather than I *should* do this" (Will, interview, March 24, 2009).

It is interesting to note that this discussion did not take place in regards to Will and Max's use of statistics in the *Flash Player* tutorial presumably because the need was evident and that which was not needed was simply ignored. It was not until problem situations, such as Will not remembering the algorithm of long division, that the general

interest of math was assessed for its usefulness. Thus problem situations experienced during the pursuit of an interest sometimes led to the assessment of an interest in math as a rationalized subject matter. "Shouldn't I just learn it when I need it?" (Interview, Jack, July 6, 2009) was the outcome of this assessment and the interest was not pursued further.

Problem situations arose from the data and occurred at different points in the pursuit of interests. Interests began with a problem situation that loosely defined the initial goals of that interest. Additionally, these problem situations were sought out through an exploratory stance made possible by productive boredom which resulted from unstructured time and in a context of ubiquitous knowledge, modulated support and space for discussion. When problem situations occurred during a pursuit habitual patterns were activated that were initially learned within the family context. Finally, problem situations led to an assessment of the interest of mathematics in which the logic of assessment was based on the usefulness of this rationalized subject matter.

Chapter Five: Findings and Implications

Given the data analyzed in Chapter Four, the findings in this final chapter seek to answer the original research questions: 1) how do young autodidactics construct and engage the informal curriculum; and 2) what are their experiences with rationalized subject matter? The data coalesced into three themes which represent one possible organization through which to explore these questions. *Theme One: Choice* establishes autonomy as the penultimate emic feature of autodidaxy through its relations with commitment to endeavors, connections made along the experiential continuum, and perceived confidence in abilities to learn and to organize the social environment for further learning. *Theme Two: Goals* entails the inherent connection participants conceive between interests and progressive, challenging goals as well as the processes by which goals mediate interests, evolve through integration of goals, and involve moments of negotiation. *Theme Three: Problem Situations* focuses on how interests are initiated through the exploratory stance of the participants as they purposefully seek out experiential problems from their environment, as well as how problem situations experienced during the pursuit of interests lead to the control of habitual patterns and moments of interest assessment.

The data presented in Chapter Four organized around the themes of choice, goals and problem situations result in the findings discussed in the following sections. First, rigor is found to operate at multiple levels within autodidactic endeavors as it is defined by interactive pursuit, a spiral process of redefinition and assessment utilizing the logic of usefulness. Second, relevance is found to operate in autodidactic endeavors as initial questions arising out of productive boredom tether knowledge to experience and results

in persistence and versatility of interests. Finally, the finding of autonomy, through the process of choice learned in the context of the family, frames interest with future orientations which afford challenging experiences resulting in joy and the progression of knowledge and skills associated with the interest.

5.1 RIGOR: INTERACTIVE PURSUITS, SPIRAL PROCESSES AND THE 'BECOMING' OF SUBJECT MATTER

The first finding in this study of autodidactic construction and engagement with the informal curriculum is that rigor is defined and activated through interactive pursuits, complex spiraling processes, and the logic of usefulness whereby knowledge, skills and values become subject matter. The processes by which autodidactics engage with socially generated knowledge inform our understanding of how interests generate informal knowledge. It is hoped that a better understanding of this informal knowledge, deemed so crucial by Dewey and SDL scholars, and its rigorous pursuit will aid the construction of different curriculum iterations with people from varied lived realities.

Interests are the building blocks of the informal curriculum (Thomas & Pattison, 2007) and they frame the rigorous pursuit of these interests through interaction with socially generated knowledge. Thus, the focus on socially generated knowledge in this section is meant to inform our understanding of the processes by which autodidactics engage in interactive pursuits, a spiraling process of never ending definition and assessment that together define and activate rigor within the informal curriculum. To aid the conceptualization of these important processes the finding of rigor will be divided into three sections. First, a discussion of interactive pursuit will lay a foundation of the importance of contextual factors in autodidactic endeavors that inevitably lead to further

interactions with socially generated knowledge thereby defining and initiating rigor. Second, an exploration of the spiraling redefinition of the pursuit shows the crucial role played by socially generated knowledge in defining rigor as an ever expanding conceptualization of knowledge. Finally, an investigation of the 'logic of usefulness' informs how rigorous development is assessed as knowledge 'becomes' subject matter. Thus, these three categorical instances of 1) interactive pursuit, 2) spiral processes of redefinition, and 3) assessment of rigor in knowledge 'becoming' subject matter represent one possible conceptualization of autodidactic interaction with socially generated knowledge and the finding that rigor is defined, established and maintained throughout the pursuit of interests.

Rigor And Interactive Pursuits

There are elements of interest pursuit undertaken for their perceived benefit in achieving certain goals. Recalling Will's memorization, Miranda's shading exercises, Jack's history lectures and Max's conditioning, interactive pursuits refer to the notion that goals mediate interests as they allow autodidactics to see "an act, or a thing, or a fact, not by itself, but in its value as part of a larger whole" (Dewey, 1967, p. 126). This larger whole refers to the interest with its inherent goals as conceptualized by the autodidactics themselves. Thus, certain elements of a pursuit are revalued as a means to a desired end. Once again these means are not simply appended to existing ends, but are revalued as the end suffuses and saturates the means. As Will 'imagined what would happen,' he explains how this suffusion occurs and thus memorization, shading, lectures and conditioning achieve 'new significance in consciousness.' "A genuine interest in the

ideal indicates of necessity an equal interest in all the conditions of its expression" (Dewey, 1967, p. 128). Thus the interest expands to include notions of the means to reach desired ends and this is how the interactive pursuit produces rigor.

It is important to note that this interactive process is functionally significant. This means that 'genuine interest' (Dewey, 1967, p. 128) is socially meaningful due to its *interaction* with socially generated knowledge. Thus, the interactive pursuit refers to this process by which socially generated knowledge is purposefully instituted within interests with resultant rigor. Similar to the contextual influence deemed so important by SDL scholars in which pursuits were heavily influenced by the setting (Roberson & Merriam, 2005; Spear & Mocker, 1984), many autodidactic goals were pursued in contexts whereby related activities were structured that purported to help people achieve their goals. These contexts are exactly where the interactions with socially generated knowledge take place. Thus interactive pursuit refers to the notion that contextual factors informed by socially generated knowledge define the rigorous pursuit of interests. Subsequently, rigor defined through interactive pursuits include further interaction with more socially generated knowledge resulting in a spiraling redefinition of a pursuit which implicates the next element of this finding.

Rigor And Spiraling Redefinition

One way to conceptualize rigor is through the spiraling redefinition of pursuits in the context of communities of practice or knowledge associated with communities of practice (Lave & Wenger, 1991). Autodidactics were found to pursue their interests through direct involvement with communities of practice such as gymnastic classes,

writing workshops and theater productions. In these contexts they are introduced to the socially prescribed means and ends associated with the interest. Additionally, autodidactics pursue their interests by utilizing socially generated knowledge in the form of 'communicated knowledge' associated with their interest that also introduce them to socially prescribed means and ends. Examples of 'communicated knowledge' include books, articles, websites and videos utilized in their pursuit of an interest. Through the process of integration they associate these new means and ends with their interest that is 'integral to the self.' Whereas interactive pursuit defines rigor through contextualizing the pursuit of interests with certain associated methods, the spiraling process of redefinition designates future orientations that are not readily available to the autodidactics at the initial stage of pursuit.

Through the spiraling redefinition of pursuit, socially generated knowledge contextualized within communities of practice offers the "standpoint, outlook, method" (Dewey, 1980a, p. 22) by which rigor is defined. However, communities of practice are not uniform in their designations of these methods. As Dewey reminds us, knowledge is socially generated (e.g. 1967) and its 'warranted assertions' are open to continuous reinterpretation including paradigmatic shifts (Kuhn, 1996). Thus, divergent and sometimes competing notions of rigor abound in communities of practice leading autodidactics to engage the structure of knowledge in their interactive pursuit of interests. Whether to pursue historical accounts through religious, political, military or cultural conceptual frameworks is one example of alternative conceptions of pursuit within rationalized subject matter. While they all are based on similar bases of 'standpoint, outlook and method,' they result in different permutations of historical accounts. In the

same way, Will confronts different conceptual frameworks and their different conceptions of rigor within music. Experiencing these alternative conceptions of rigor, he is drawn into the wider debates and notions surrounding the interest and ultimately decides which best matches his present aim.

The important point is that through the spiral redefinition of pursuit autodidactics begin to struggle with the structure of socially generated knowledge. Entering into this 'conversation,' differential notions of rigor are explored and a larger conceptualization of the pursuit of an interest is obtained. Thus, the engagement with socially generated knowledge in the interactive pursuit leads to spiraling progressions of redefinition which result in a broadening conceptualization of an interest and rigor is expanded to include conceptualizing the assumptive basis of the particular 'method, standpoint, outlook' one is using within an interactive pursuit. "To foresee a terminus of an act" and thus, "to have a basis upon which to observe, to select, and to order objects and our own capacities (Dewey, 1980b, p. 124), occurs within a spiraling redefinition of pursuit by which alternative notions of rigor are (re)cognized and navigated. As the autodidactic becomes immersed in the socially generated knowledge surrounding the interest, they become aware of the branches of viable pursuits supported by the associated community of practice. Thus, the spiraling process of redefinition defines rigorous pursuit as an expanding awareness and exposition of these different permutations of pursuit.

So far two notions of rigor have been found within autodidactic pursuits. First, interactive pursuits occur in contexts whereby activities are associated with the pursuit of an interest and it is in these contexts of pursuit where interaction with socially generated knowledge works to define and animate rigor. Secondly, the spiral process of

redefinition functions to initiate the autodidactic into larger conversations of differential notions of rigor contained in communities of practice. It is this element of rigor by which autodidactics broaden their conception of an interest. However, notions surrounding the interest itself are also found to be instrumental in defining and activating rigor in the context of autodidactic pursuits and their interaction with socially generated knowledge.

Rigor And 'Becoming' Subject Matter

This final section dedicated to the finding of rigor within autodidactic pursuits explores the logic of interest assessment as it relates to interaction with socially generated knowledge. As the context for this interaction, problem situations experienced during the pursuit of an interest at times initiate an assessment of the interest itself. Assessment proceeds in a larger context than normally attributed to communities of practice. Instead 'society's shoulds' situate rigor in a larger context and implicate notions of a standard curriculum. The autodidactics are cognizant of these 'shoulds,' however they assess the rigorous pursuit of interests through the 'logic of usefulness.'

While in the pursuit of interests, problem situations are often experienced and lead to further interaction with socially generated knowledge. Autodidactics alter their pursuit in light of aims, they choose between viable aims within an interest, and occasionally they assess an interest for its usefulness. All of these instances result in additive notions of rigor within the pursuit of an interest and lead to further interaction with socially generated knowledge; however the latter leads to an explicit exploration of the uses of rationalized subject matter in a larger context. The expansive Deweyen notion of subject matter is the logic by which autodidactics assess these interests and the

notion of resultant rigor situates knowledge in the largest conceivable context which includes society and the combined knowledge of the human race. For it is in this assessment of interests that autodidactics use Deweyen notions of 'becoming' subject matter to investigate notions of rigor within this larger context. Thus, if a viable use can be found for an interest, such as math for computer programming, then the interest is deemed useful and the pursuit proceeds. Within this assessment, rigor again is implicated due to notions of the overall usefulness of the interest itself, thus if an assessment is favorably determined, the overall interest is situated within larger societal constructs such as subject matters and fields of knowledge. However if a need can not be established for an interest, then it is abandoned until such time as it is useful, but the overall notions surrounding this interest are still expanded. The distinction between spiral redefinition of pursuits and the assessment of interests is one of scope. In spiral redefinition interest conceptualization is expanded to include multiple permutations of rigor; while in assessment of interests, socially generated knowledge and its attendant prescriptions are situated within larger notions of subject matter, and it is at this point that autodidactics attempt to situate this knowledge within an overall societal vision of knowledge including cross- and inter- disciplinary notions of 'becoming' subject matter.

The important point for the present discussion is that this assessment leads to an exploration of possible uses for knowledge to become subject matter in the rigorous pursuit of an interest. Dewey's notion of 'knowledge becoming subject matter' is operative as autodidactics explore possible uses for rationalized subject matter. It is in this moment of assessing an interest that autodidactics are interacting with socially generated knowledge in a novel way, or at least one left unexplored until now. For it is in

this moment of exploration that they are seeking wider notions of rigor within an assessment of the usefulness of interests in a larger societal context. Autodidactics interact with socially generated knowledge in complex ways as they utilize goals to mediate interests, aims to decide on viable means and ends, and the logic of usefulness to explore societal knowledge structures. In all of these instances, autodidactics are defining and activating rigorous pursuits which include interactive moments of mediated interests, spiraling redefinition of pursuits in which rigor is further refined to include larger conceptions of knowledge construction with an interest as well as the overall usefulness associated with their interests in considering societal level notions of disciplines. This interaction is not a solitary endeavor, but occurs in the context of communities of practice and with knowledge in the Deweyen conception of socially generated. Additionally, this is similar to Jerome Bruner's work (1960).

> To instruct someone is not a matter of getting him (sic) to commit results to mind. Rather, it is to teach him to participate in the process that makes possible the establishment of knowledge. We teach a subject not to produce little living libraries on that subject, rather to get a student to think mathematically for himself, to consider matters as an historian does, to take part in the process of knowledge-getting. Knowing is a process not a product (Bruner, 1960, p. 72).

The process of knowing occurs within interactive pursuits in which means and ends are acknowledged, alternative notions of aims within socially generated knowledge are recognized, and specific disciplines are situated within larger societal structures of knowledge in ever expanding definitions and applications of rigor. Autodidactics would substitute 'teach' with 'learn' in Bruner's quote, but it is clear that the 'process of knowing' is operational in autodidactic endeavors and implicates the rigorous pursuit of interests.

Thus, the first finding of this study as it relates to curriculum iterations shows the importance of focusing on interactions with socially generated knowledge as it supplies definitions of rigor which are integrated and operationalized within the autodidactic pursuit of interests. Rigor is found in autodidactic pursuits due to their interaction with socially generated knowledge and is important in understanding how the informal curriculum can be utilized in different contexts with people from varied lived realities.

5.2 RELEVANCE: PRODUCTIVE BOREDOM, TETHERS AND VERSATILITY

The second finding discussed in this chapter is relevance and how it operates within autodidactic construction of the informal curriculum as they interact with rationalized subject matter. In the following section relevance is explored as initiating a foundation of productive boredom that affords tethers of experience that result in persistence and versatility. Thus, the investigation of relevance will be divided into three sections. First, the search for relevance provides the initial foundation of productive boredom. Secondly, relevance operates as an experiential tether keeping knowledge that is disconnected from human experience firmly grounded to autodidactics' initiating questions. Finally, relevance affords persistence and versatility of interests within autodidactic endeavors.

The Search For Relevance In Life

The possible context of autodidactics in the twenty-first century United States includes ubiquitous knowledge, modulated support and space for discussion. With these autodidactics this context interacts with unstructured time to produce an exploratory stance in which they purposefully seek out problem situations in their environment.

Productive boredom motivates autodidactics to seek 'something to work at.' This displays the foundational quality of relevance in autodidacts' lives as an 'active and propulsive' dimension beckons their engagement with the environment resulting in problem situations being identified that provide for a relevance of life. That which they seek 'to work at' speak to this quality of relevance and explains findings in the SDL literature in which autodidactics "take advantage of any opportunity that random events may offer them in order to learn," (Danis & Tremblay, 1987, p. 139). Thus, in this finding of relevance, the first dimension focuses on a large, encompassing feature: the relevance of life.

This exploratory stance exhibited in the themes of chapter four hints at this foundational quality of the finding in that autodidactics approach life searching for relevance. The significance of this approach for life-long learning (e.g. (Knowles, 1984; Roberson & Merriam, 2005) is apparent; however it also displays the boundaries under which these problem situations operate.

As discussed in Chapter Two, the environment of autodidactics is not 'out there' for a correspondence theory of truth has been substituted with an experimental theory. Paradoxically, this results in certain affordances balanced by boundaries which delimit certain problem situations from consciousness. Autodidactics' exploratory stance is copasetic with an experimental theory of truth, however ongoing interests, developmental characteristics and environmental factors bring certain problem situations to the forefront of autodidactic consciousness. This structures the meaning of relevance in particular ways. Subsequently, other problem situations and their attendant relevance will escape conscious deliberation and may close down certain avenues of pursuit. This tendency is

referenced in unschooling discussions where mathematics as a rationalized subject matter does not enter into problem situations or their pursuit often enough for some unschoolers to be comfortable with sole use of the informal curriculum. While this does not guarantee that all rationalized subject matter will be relevant as it is 'reckoned with in the pursuit' of solutions to problem situations, it does afford taut connections along the experiential continuum which is the definition of relevance within the pursuit of particular interests. It is to these particular notions of relevance that the discussion now turns.

Relevance: Tethers And Socially Generated Knowledge

Many autodidactic interests begin with a problem situation from their immediate environment, and form the basis for 'their questions' deemed so important by the autodidactics themselves. Similar to findings from the SDL literature, problem situations are an initiator of interests (Resnick, 1987; Taylor, 1987) and some are attributed to life cycle circumstances (Roberson & Merriam, 2005). Although with younger autodidactics these life cycle circumstances translate to problem situations such as those arising from driving, loss of elderly relatives and pubertal changes rather than menopause and the loss of a spouse. Nonetheless in both groups, autodidactic problem situations arise from their immediate environment and form the beginning context which frames the initial ill-defined goal of solving the problem situation. This ill-defined goal becomes the standard for establishing relevance within an autodidactic pursuit.

These initial framings are ill-defined and fall into two broad categories, both of which allow for connections to be made along the experiential continuum as they initiate

autodidactic pursuit of solutions. The first type is exemplified by Max's problems with computer games and prompts him to design games that solve these problems. As an initial framing, Max only acknowledges that he wants to solve the problem, but he is quickly involved in socially prescribed means and ends associated with this initial ill-defined goal. The important point is that his subsequent pursuit including hours of game design and work with the *Flash Player* tutorial is tethered by this initial problem situation. Thus, relevance is established between particular facets of the pursuit and the initial problem no matter how ill-defined. The second type of problem situation is one in which a conundrum does not allow information to fit into a preexisting framework of understanding. Again, Miranda's pursuit to expand her framework is tethered to her human problem of a round moon, and thus a taut connection remains between her expanding framework in light of knowledge pursued and the initial problem situation. Thus, a taut connection is the establishment of the relevance of socially generated knowledge in light of a human problem. Through the finding of relevance autodidactics are in a unique position to make these connections because 'their questions' allow for the establishment of relevancy that connects knowledge along the experiential continuum.

Additionally similar learning in contexts of problem situations, studied extensively under the guise of problem-based learning and compared to more traditional instructional formats, has been found to increase learners' knowledge and skills. These studies have also shown that problem-based learning results in slightly less knowledge covered but with more of the acquired knowledge remembered (Dochy, Segers, VandenBossche, & Gijbels, 2003). In other words, socially generated knowledge deemed relevant to a particular problem situation results in better recall of that

knowledge. Thus, relevance affords better recall, but is also implicated in persistence alluded to above, as well as a versatility in connections made along the experiential continuum.

Relevance: Persistence And Versatility

Interests are persistent partly because they are 'integral to the self,' but also due to the process by which autodidactics choose interests, their pursuit, and the relevancy established. When autodidactics interact with socially generated knowledge, the interests are disciplined rather than the individual specifically because of relevancy. The choice of pursuit insulates the autodidactic from unsuccessful learning endeavors because it is framed as a problem with the 'mode of learning' over which the autodidactic has control. If the mode of learning or the present information is not found to be relevant to their interest, then the lack of success does not impact the interest or the self-image associated with the attendant subject matter. However successful attempts are conceived as an outcome of the autodidactic's interest in the chosen area because it is relevant. This is in correspondence with findings from the SDT literature (Ryan & Deci, 2000; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997) in which choice is correlated with interest, excitement and confidence which manifests in persistence, as well as performance and creativity. Thus, by choosing relevant knowledge and methods of pursuing interests, autodidactic interests are persistent because they benefit from success while unsuccessful attempts are deemed irrelevant to their pursuit.

Interests are also versatile due to the operation of relevancy in autodidactic pursuits. As discussed above in explaining the operation of relevancy as tethers, 'their

questions' represent the foundation of interests as conceptualized by autodidactics, and thus their chosen pursuit of these interests is relevant to an experiential base. As they pursue interests through the spiraling engagement with socially generated knowledge discussed in *Finding One*, relevancy operates to keep a taut connection between 'how to do' knowledge and the communicated knowledge and rationalized subject matter they come into contact with as they choose their pursuit. Not only does relevancy explain the SDL literature finding of unpredictable outcomes, but also delineates how relevancy operates to connect divergent knowledge and skills.

The connection between human purpose represented by 'their questions' and rationalized subject matter they choose to utilize in their pursuit is reestablished. Connections are not simply chronological, but experientially maintained through the ongoing relevancy of the pursuit to 'their questions' which tethers socially generated knowledge. However, the chosen path and random factors intercede throughout autodidactic endeavors and result in disparate knowledge being experientially connected by the same tether. For example, Miranda's interest in art tethers together such disparate socially generated knowledge as animal habitats and architectural design. Thus relevancy affords versatility in establishing connections between 'their questions' and socially generated knowledge with which they come into contact.

To summarize, relevancy is an important finding in the process of autodidactic endeavors. First, it establishes a general search for the relevancy of life which initiates the search for problem situations in their environment. Secondly, relevancy in this context is defined as the connections along the experiential continuum that increase knowledge recall. Finally, relevancy affords the persistence of interests through the

establishment of relevant learning as well as versatility in connecting divergent knowledge to the same experiential base.

5.3 AUTONOMY AS THE DEFINING FEATURE OF THE INFORMAL CURRICULUM

Autonomy, literally 'self-rule,' is conceptualized here as distinct from independence and defined as an "internal perceived locus of causality" (Ryan & Deci, 2000, p. 70). These autodidactics view choice as the penultimate factor of their education and their lives. Choosing their own interests and how they are pursued, autonomy is intimately related to the commitment autodidactics display towards these chosen pursuits. Subsequently, commitment is conceived by the participants as deriving from autonomous choices and displayed as serious concern for the interest resulting in effort. Additionally, goals are inherent to the pursuit of these interests to which they are committed and results in seeking challenges that lead to a progression of the knowledge, skills and values associated with the interest.

Thus, the finding of autonomous choice leading to commitment and goals will be discussed utilizing three organizing elements of how autonomy relates to construction and engagement with the informal curriculum. After a brief discussion of autonomy in general the first section will focus on the process of choice in relation to interests, as well as the effects of this process on the experiences of learning associated with the chosen interest. Second, interests as 'integral to the self' produce commitment to associated activities resulting in effort. Lastly, the interests contain future conceptions of 'self-expression' that involve notions of progress and challenge.

Autonomy And A 'Self'

Autonomy is conceived by the participants themselves as choice and discussed in terms of decisions. Their sense of autonomy is obviously problematic in light of philosophical discussions surrounding linguistic critiques of autonomy (e.g. Wittgenstein, 1962), cultural critiques of rational decisions (e.g. Habarmas, 1963), the unconscious as an uncontrollable mitigating factor in autonomy (e.g. Freud, 1949) and the power structures (e.g. Foucault, 1995) that influence not only the choices made, but the limits on choices themselves. Additionally in light of these critiques, notions surrounding the decentered self (e.g.Honneth, 1995) and the Other (e.g. Merleau-Ponty, 1945/2002) have led to debates over the viability of any construct of self, as well as the ability of any construct of self to engage in autonomous acts.

However, the finding of autonomy as the "internal perceived locus of causality" is conceived as the penultimate feature by these autodidactics, and thus their educational endeavors are imbued with choice. Whether they are able to make autonomous choices, or indeed even able to conceive of choices autonomously is left to further analysis with different theoretical frameworks. Thus, for purposes here autonomous choice is *perceived* as operating in autodidactic contexts and thus the elements linked to it are judged according to their "*functional significance*, or meaning of social events for people's goals and motives" (Ryan & Deci, 2006, p. 1572, italics in original). While autonomy as the defining characteristic of autodidaxy is a fitting example of a tautology, the importance of choice for the participants themselves in how they conceived of interests, as well as the process by which these choices are made, operates in this context to produce commitment and goals.

This conceptualization of autonomy and a 'self' is copasetic with the theoretical framework utilized in this study. Dewey's epistemology, as well as his notions of interest, means/ends relationships and discipline in conjunction with findings from the SDL literature provides a constellation of concepts which help us to frame these explorations of autodidaxy while simultaneously allowing for multiple interpretations. Thus, without adopting the entire Pragmatic framework, we are still able to utilize these notions within one possible conceptualization in order to frame a discussion of the informal curriculum and the place of rationalized subject matter, as well as how these discussions may inform curriculum iterations in varied contexts with people from different lived realities.

The Process Of Choice And Experiential Joy

The meaning of choice operates as a process in these contexts and is conceived as the defining feature of the participants' education. Subsequently, the process of choice does not occur in a vacuum, and the context of ubiquitous knowledge, modulated support and space for discussion interacts with the process of choice such that autonomy is separated from individualism as endeavors occur with reliance on others. This reliance has been attested to as an important factor with adult autodidactics (Candy, 1991; Taylor, 1987), and operates within the family and the broader community.

While the broader community is primarily utilized as resources for the pursuit of an interest and the collection of possibilities, the family space for discussion allows moments of choice to become explicit whereby the process of making choices is contextualized with relevant factors designated by the family. Thus, "There's cost, time,

investment. I think it's like any other decision you make. Whether its pros and cons …" (Katarina, interview, April 1, 2009). The choice of interests and their pursuit are subjected to this process of choice learned in the family context by which relevant factors are discussed in spaces deliberately created to make these decisions explicit. Thus, choice includes the explicit discussion of relevant factors and this process is one way in which family background impacts autodidactic endeavors. Thus, the finding of autonomy corresponds with the SDL literature as well as Dewey's notions surrounding the importance of family background and implicit knowledge.

Learning this process of choice within the family lays bare one way by which family background and implicit knowledge orders the conception and pursuit of autodidactic endeavors. However, other elements of choice contain functional significance for these autodidactics. Choice is explicitly linked by the participants to enjoyment and to the experience of learning itself. Where one has perceived choice the experience is enjoyable, however a lack of choice negatively affects the experience of the interest itself. "Why would you choose to do something you weren't enjoying" (Miranda, interview, July 6, 2009). This link between choice and enjoyment imbues the interest, as well as the attendant subject matter. Recent literature has attested to the link between emotion and cognition, however very few studies have isolated emotion in relation to learning with the notable exception of negative examples such as mathematics anxiety (Bibby, 2002). There is limited research suggesting positive correlations between positive emotions and learning with a few exceptions hinting at this important connection (Rader & Hughes, 2005). This means that while choice operates to imbue interests and subject matter with joy at its experiential base, as well as producing interests that are

'integral to the self,' this should not lead to conclusions that automatically associate these findings with increased learning. This notion of chosen interests being integral to the self implicates commitment as an element of choice and it is to this discussion that we now turn.

The Process of Choice and Effort

Commitment is shown to be integrally linked with the choice to pursue particular interests. Conceptualized as 'being serious' and operationalized as time and effort, one's commitment to an endeavor involves an act of 'self-expression.' By choosing interests autodidactics are involved in acts of self-expression that delineate one element in Dewey's definition of interest. Interests are 'objective in the sense of concerns,' and thus when an interest is chosen it is a self-referential event in which the person's sense of self is integrally linked with the pursuit of that interest. In other words, the functional significance of choosing an interest is not only linked to joy, as shown in the previous section, but also induces commitment leading to efforts that are integral to the self. Thus, to choose an interest is to be concerned with the pursuit of that interest. This means that the interest stands in between the person and their 'dawning energies and desires.' By committing to the interest through choice, autodidactics engage 'seriously' in the pursuit of the interest with resultant effort. Effort is positively associated with increases in learning (Bandura, 1997).

Not only is effort produced by choice and the resulting commitment, but the fact that the interest is 'integral to the self' means that interests are not easily conceived as ending. Thus, through choice autodidactics are committed to a becoming. There is 'an

internalization of worth' whereby autodidactics are in the process of 'carrying into effect a dawning energy or desire.' The interest is 'in between' the person and the materials and results of their actions, and this means they are committed to becoming a self directly involved in a 'dawning energy or desire.' This not only explains the data, but also displays the level of commitment choice facilitates through its connection to 'operating with an effect in mind.' These autodidactics are seriously committed to interests that entail becoming artists, writers, programmers, sword fighters, gymnasts, dancers, astronomers, historians and musicians. Once again, this is not to argue for their completion, but only to indicate the productive power contained in the choice of interests and subsequent commitment. These interests never end because they are 'integral to the self.' It is clear that the process of choosing interests imbues associated activities with joy and results in commitment due to the integration of the interest into notions of the self. Nell Noddings (2003) calls attention to happiness in the analysis of the societal aims for education. Given that the process of choice results in joyful commitment to their educational pursuits, this feature of autodidaxy should inform this analysis.

The Process Of Choice And Future Orientation

Along with joyful commitment, the process of choice implicates interests with future orientations that are ill-defined, but frame the pursuit of an interest. Thus, to map out the finding of autonomy thus far: 1) the process of choice is learned in the family context and imbues experiences of an interest with joy; 2) these interests are 'integral to the self' thus fostering a high level of commitment which results in effort; and now 3) interests contain future orientations that frame their pursuit with notions of progress.

Once again utilizing Dewey's notion of an interest as an "impulse functioning with reference to an idea of self-expression" (1967, p. 133), not only implicates notions of commitment important in understanding autodidactic pursuit, but also in understanding how future orientations are inherent to the interest itself. Conceiving of interests as that which "presents itself as an instrument of carrying into effect some dawning energy or desire" (Dewey, 1967, p. 124) implies a future act of self-expression. It is this future orientation of interests that implicates notions of progress by which autodidactics frame their pursuit of an interest.

Thus, beginning conceptions of artists, dancers, programmers, historians, writers, actors, astronomers and musicians frame the pursuit and the parameters of progress. These conceptions are ill-defined and yet they still operate as the impetus and definition of progress. This is the 'dawning energy' referenced in Dewey's conception of interests. To become a gymnast begins with some notion of a round-off back handspring that frames the pursuit of the interest until a later conception of how this element functions in relation to floor routines in gymnastic competitions is realized. Whether ill-defined or well understood, the development of skills and knowledge associated with the interest operate within future conceptions throughout the pursuit of an interest, and thus these future conceptions are viewed as goals by the autodidactics themselves as inherent to the interest itself. "If you choose it, it has a goal" (Jack, interview, April 22, 2009). Indeed, the process of choice not only imbues the interest with joy and fosters effort, but also leads to an association of future moments of self-expression with progress. However, the progression of an interest is also associated with notions of challenge found to be an intervening factor in the joy of experiencing the pursuit of an interest.

Recalling Csikszentmihalyi's work autodidactics experience joy and thus seek out activities where "the opportunities for action perceived by the individual are equal to his or her capabilities" (1990, p. 52). Optimal experience lies in the balance between challenges and skills, and thus goals that balance opportunities for action with capabilities result in a challenging progression in the skills and knowledge associated with an interest. In this way, the joy associated with the experience of the interest is explained by autodidactics choosing interests with inherent goals. These goals frame the pursuit of an interest such that opportunities for action and capabilities are balanced, the autodidactic experiences joy, and progress in the associated skills and knowledge continue. Thus, the process of choosing interests with inherent goals leads to seeking challenging experiences associated with joy that affords a progression in the knowledge and skills associated with the interest.

The finding of autonomy as the process of choosing interests with future conceptions resulting in effort offers one possible conception of how autodidactics construct and engage the informal curriculum. Through the process of choice, learned in the context of the family, interests are framed by future orientations which afford challenging experiences resulting in joy and the progression of knowledge and skills associated with the interest.

5.4 LIMITATIONS OF THE STUDY

Possible limitations of the study highlight the subjects, the length of the study and the researcher's position in qualitative research. Each of these limitations will be

discussed as well as factors meant to alleviate their influence on the study. The first possible limitation is the advantaged context of the subjects in this study.

Never having been to school, the subjects were advantaged in terms of socio-economic status as well as cultural characteristics. While the mother is Latina, the subjects self-identified as white-Latino and appeared as white in the context of the United States. Additionally, both parents are well-educated and the white father is engaged in full-time employment resulting in the mother being available throughout the day. Even though these characteristics may limit the transferability of the data, these subjects were specifically chosen due to these same factors. Before exploring the possibilities of the informal curriculum with varying groups in U.S. society, which is deemed important for further research, subjects were chosen based on their 'success' with this type of informal education. However, these subjects were also chosen because they did not represent some of the 'outliers' associated with this educational phenomenon, such as the Colfax children who went to Harvard. Instead, these subjects appeared as successful and privileged, but not exemplar. As such, they were deemed important for the initial exploration of the informal curriculum with older children.

Another limitation of this study is the relatively short duration of data collection. The six months spent with the subjects did achieve theoretical saturation, but due to the 'thickness' of the context, more time could aid our understanding of the complexity involved in the informal curriculum. Once again, this is a future research implication, and subsequent studies will be able to follow subjects for longer periods of time resulting in a better understanding of the context.

The final limitation of the study discussed here is that of the principal investigator. While my positionality as a homeschooling father could have led to a complicating identification with the subjects, multiple resources and situational constraints protected the data. First, triangulation and peer debriefing were used systematically throughout data collection and analysis. Second, the specific style, groups and context of my homeschooling are different than that of the subjects studied. And third, member-checking was used extensively in order to protect against the conflation of research site and personal context. Even though care was taken to guard against limiting factors, the nature of qualitative research privileges the analysis and authority of the investigator. As such, all misunderstandings and misrepresentations are hopefully inconsequential, but they are completely mine.

5.5 IMPLICATIONS OF THE STUDY

The implications of this study involving autodidaxy, the informal curriculum and socially generated knowledge center upon alternative curriculum iterations and further research needed for its implementation. Data analysis throughout the themes and findings discussed above culminate in three implications. First, while not engaging all of the disciplines traditionally associated with formal schooling, the informal curriculum does afford opportunities for the rigorous interaction with rationalized subject matter. Second, the informal curriculum also allows for distinct processes by which connections are made along the experiential continuum resulting in relevance. Finally, in order to facilitate the use of the informal curriculum in formal educational institutions, research is

needed in which the informal curriculum is operative to varying degrees in contexts with differential affordances of autonomy and with learners from varied lived realities.

Rigor

It is clear from the data analysis in the themes and findings that the informal curriculum does afford opportunities to interact with rationalized subject matter. Indeed, given the importance of rationalized subject matter as the 'combined knowledge of the human race,' it would be difficult to conceive of living in our society without interaction occurring. However, the characteristics and results of these interactions implicate the informal curriculum as a useful organizing principle in curriculum iterations. Before discussing specific elements of this implication it is important to note that the informal curriculum is not being discussed as a replacement for other curriculum constructions.

Our educational institutions are far from accepting notions of the child study movement Dewey argued against so vehemently at the turn of the century (1980a). Therefore, the implication that the informal curriculum affords interactions with rationalized subject matter simply highlights the interactive processes that may prove helpful in alternative curriculum constructions. These alternative curriculum constructions call for a very different program than a complete disruption of the curriculum restructured solely around student initiated interests as this is not pragmatic and thus not warranted. However, there are curricular components amenable to the informal curriculum. The elective structure utilized in many formal educational institutions, as well as alternative courses, hint at possible areas in today's schools where the informal curriculum could be utilized as an organizing principle. Thus, the discussion

proceeds to specific elements of the interaction with rationalized subject matter afforded by the informal curriculum.

It is evident through the themes and findings that the informal curriculum contains inherent goals, and that these goals are constantly redefined through interaction with socially generated knowledge. Conceived as goal evolution, this redefinition results from interaction with knowledge through which the integration and negotiation of socially prescribed means and ends occur. The processes of interactive pursuit, spiraling redefinition and the 'becoming' of subject matter translates into deep engagement with knowledge structures surrounding autodidactic interests. While this does not always include knowledge in the Deweyen sense of 'rationalized,' it nonetheless includes socially generated knowledge in the context of communities of practice that will benefit learners as they are immersed in the rigorous conception of knowledge. Thus, the interaction with socially generated knowledge offered by the informal curriculum leads to the adoption of 'standpoint, outlook, method' while involving learners in the larger contexts of knowledge debates and construction evident in the disciplines associated with their interests. Additionally, at times the socially generated knowledge is specifically rationalized subject matter in the form of classes, textbooks, websites and lectures in which concepts are connected to each other rather than to specific human experience. Thus, the informal curriculum affords opportunities to interact with socially generate knowledge in the rigors of the discipline become (re)cognized and utilized by the learner.

It is exactly in these contexts where means and ends are redefined that interactions with socially generated knowledge take place. For the informal curriculum affords processes whereby inherent goals include notions of challenging progression that

frame the pursuit and lead to an exploration of socially generated knowledge. Thus, the informal curriculum not only affords interactions with socially generated knowledge, but frames the pursuit in such a way as to make the interaction inescapable. Thus, the educational pronouncement so prevalent on district websites of curriculum that is rigorous seems to be possible through the informal curriculum which necessitates the interaction with socially generated knowledge resulting in a spiraling redefinition of socially prescribed means and ends in light of aims and a greater conception of knowledge structures in our society.

Relevance

The informal curriculum also allows for distinct processes by which connections are made along the experiential continuum. Throughout the data analysis in the results and findings these connections are referred to as relevance and explicated in Deweyen epistemological terms. Thus connections along the experiential continuum are defined as a process of relevance and delineated for their implications in alternative curriculum iterations.

Relevance is deemed crucial to education in that it provides motivation to the learner (e.g. Bruner, 1972; Ryan & Deci, 2000) and assumes a use for knowledge in the Deweyen sense of knowledge 'becoming subject matter.' The concept is utilized here as a combination of two definitions.

> Relevant: Having significant and demonstrable bearing on the matter at hand.
> Relevance: The ability (as of an information retrieval system) to retrieve material that satisfies the needs of the user (Merriam-Webster Dictionary, 2005).

Relevance as ‘satisfying the needs of the user’ highlights the notions of motivation and its attendant educational outcomes such as effort, persistence and greater recall. While relevance as ‘bearing on the matter at hand’ implicates Dewey’s notion of ‘becoming subject matter’ in which knowledge is “reckoned with in the process of a person carrying forward an active line of interest” (Dewey, 1980b, p. 141).

With this definition of relevance, the informal curriculum and the connections it fosters provide versatility. These connections, as the process of relevance, show the informal curriculum as affording a versatility whereby the informal curriculum tethers divergent knowledge to an experiential base. This experiential base is the important ‘how to do’ knowledge that is closely linked to human problems arising from the environment. As such, the tethers afforded by the informal curriculum link specific knowledge together through the pursuit associated with the informal curriculum. Thus the informal curriculum affords connections described here as a versatility which allows for relevance to occur across divergent subject matter.

Thus, the utilization of the informal curriculum in alternative curriculum constructions will afford processes whereby rigor and relevance are achieved. Through the necessity of engagement with socially generated knowledge and the versatile connections made possible, the informal curriculum offers intriguing possibilities for alternative curriculum construction in more formal contexts. However if the informal curriculum is to be utilized, further research is needed that explores the dynamics between the informal curriculum in contexts with varying degrees of autonomy and with learners from varied lived realities.

A Call For Research

In initial considerations, curriculum and autonomy do not appear to be congruent. Curriculum as a course of study is normally conceived as the concepts, facts and skills associated with subjects deemed important in a society, while autonomy is usually conceived as freedom from control originating outside of the individual. There seem to be insurmountable differences between these two notions whereby curriculum determines what is to be learned and autonomy calls for freedom from outside determinates of what should be learned. However, autonomy is conceived here as separate from individualism, defined by its functional significance and operationalized as choice. While curriculum can also be conceived differently so as to focus on broad parameters of pursuit while allowing enough autonomy to fulfill the requirements of society and the people who comprise them.

The third implication of this study is a call for research in which the informal curriculum is operative to varying degrees in contexts with differential affordances of autonomy. By utilizing the conceptions in this exploratory study, different contexts need to be analyzed in which some of the processes delineated are operative. Building up a knowledge base of these processes will hopefully lead to an amalgamation of society's aims and the informal curriculum of the people in the society so that a dynamic equilibrium can be maintained.

Additionally, the informal curriculum must be instituted with learners from varied lived experiences. The opportunity to engage learners through their own interests offer exciting possibilities to those most disengaged from our formal structures of education and its attendant knowledge. This area of research is the most exciting as it offers a

chance to include divergent streams of knowledge and knowledge construction within an overall context of increasing interaction with socially generated knowledge. It is in this area that the true worth of the informal curriculum can be explored.

Appendices

Parental Interview Protocol

1. Describe some typical activities your child has been involved in lately.
2. Describe a particular interest your child has developed that they no longer seem to pursue.
3. Explain how you define your role in their pursuit of this interest.
4. What were the circumstances in which the interest developed?
5. Were there particular problems or wonderings associated with the beginning of this interest?
6. Describe/explain any problems they encountered during the pursuit of the interest.
7. How did they overcome them?
8. What resources were used to pursue this interest?
9. Did your child have clear goals when they began the interest?
10. How long did the interest last?
11. What seemed to be the end of the interest?
12. Did the goals change?
13. If so, why do you think they changed?
14. Do they compare their interests and pursuits to anyone or anything in particular?
15. What else do you think I should know about their interests?
16. Are there any results of their interests that I could see?
17. What are they interested in right now?

First Autodidactic Interview Protocol

1. Tell me about an interest you used to have.
2. How did you become interested in (one of the stated interests)?
3. Describe the context (what was going on) when you became interested.
4. Was their a specific problem or wondering that led to this interest?
5. When you first became interested did you have a clear idea of what you wanted to do?
    a. If you did, where did this idea come from?
    b. If not, how did you decide to start?
6. Do you always start interests that way?
7. Give me a basic timeline of what you did while you pursued this interest.
8. Were there problems you encountered along the way?
9. If so, what resources did you use?
10. How did those resources help you?
11. Explain a time when you were stuck and the resources were not helping.
12. Explain what lead to the end of this interest.
13. Did the goals change as you went along?
14. If so, why do you think they changed?
15. What are you interested in right now?
16. Explain what was happening when this started.
17. What have you done so far?
18. Do you have a goal or something you definitely want to do related to this interest?

Second Autodidactic Interview Protocol

1. What have you done about (one of interests) while I haven't been around?
2. What about (another interest)?
3. Have you accomplished/done what you wanted to do when you started?
4. If so, do you think you are done, or has this led to something else? Tell me more about that.
5. If not, why do you think that is?
6. Have you run into any problems?
7. If so, what did you do about it?
8. How did you know to do that?
9. What resources have you used that have been helpful?
10. What resources have not been helpful?
11. Have you met anyone helpful?
12. If so, how did you find out about them?
13. Do you always/sometimes do that?
14. Do you still have the same goal or idea of what you want to do?
15. If not, explain how it has changed.
16. Why do you think it has changed?
17. What helps you the most when you are stuck on something?

Third Autodidactic Interview Protocol

1. Explain where you are about (one of the interests).
2. Explain how you became interested in this.
3. What have you done about it when I have not been around?
4. Why do you think you picked to do that?

5. Did you have any problems?
6. If so, what did you do about them?
7. Do you know of any materials that try to teach this type of stuff?
8. If so, how did you find about them?
9. Were they helpful? Explain.
10. If not, do you usually look for stuff like that (organized material meant to teach about the interest)?
11. Did you meet anyone who was helpful?
12. If so, how did you meet them? And, how specifically did they help you?
13. ~~How did you know you were 'done'?~~
14. Did your goals surrounding this interest change?
15. If so, why do you think they changed?
16. Did this lead to something else?

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Vita

Thomas D. Wacker was born in Nebraska and lived in three states before he was two years old. Born to Lil and Jim, he lived most of his life in Texas, specifically in Seguin, San Marcos and Fort Worth. A few cold years in North Dakota and Minnesota broke up these milder climates, but he finished high school in Fort Worth and attended Texas Christian University gaining his B.A. in sociology in 1992. After a move to Houston and graduate classes in sociology at The University of Houston, he received his teaching degree and masters while teaching in the Houston Independent School District for five years. After two years at a private school and one year back at Houston ISD, he moved to the Austin area and became a graduate student. Working as a graduate teaching assistant he co-taught the social studies methods classes and facilitated student teachers in the field. After completing classes he went back into the classroom to teach at a high school in the area. In all he has taught middle school for seven years and high school for two including: 8th grade US history, 11th grade US history, AP US history, world geography, sociology, psychology, Texas history, and world cultural studies in addition to two years as a co-instructor of social studies methods classes for student teachers.

Permanent email address: tom.wacker@gmail.com

This dissertation was typed by Thomas D. Wacker.